THE LANCET.

A Journal of British and Foreign Medicine, Surgery, Obstetrics, Physiology, Chemistry, Pharmacology, Public Health, and News.

TELEGRAPHIC ADDRESS—LANCET, WESTRAND LONDON TELEPHONE NUMBER—GERRARD 5356

No. XXIV. OF VOL. II., 1917.
No. 4920. Vol. CXCIII. LONDON, SATURDAY, DECEMBER 15, 1917. Price 8d.

TO ADVERTISERS.

In view of the Christmas Holidays in the following week, THE LANCET of Dec. 22nd will be published on Thursday, Dec. 20th. Advertisements must reach the Office at latest by the first post on Wednesday Morning, Dec. 19th.

Now Ready. Royal 8vo. Pp. xii. + 317. With 322 Illus. Price 15s. net.

TINEL'S NERVE WOUNDS: SYMPTOMATOLOGY OF PERIPHERAL NERVE LESIONS CAUSED BY WAR WOUNDS.

By J. TINEL, Ancien Chef de Clinique et de Laboratoire de la Salpétrière. With Preface by Professor J. DEJERINE. Revised and edited by CECIL A. JOLL, F.R.C.S. Eng.
Baillière, Tindall & Cox, 8, Henrietta-st., Covent Garden, London, W.C.2.

Now Ready. Crown 8vo. Pp. xvi. + 345. With 168 Illus. Price 5s net.

MARTINIER AND LEMERLE'S FACIAL INJURIES AND THEIR REPAIR AND THE TREATMENT OF FRACTURED JAWS.

By P. MARTINIER and G. LEMERLE, Professors to the Dental School of Paris. Translated by H. LAWSON WHALE, M.D., F.R.C.S., Captain R.A.M.C. (T.).
Baillière, Tindall & Cox, 8, Henrietta-st., Covent Garden, London, W.C.2.

THE REFERENCE BOOK FOR THE BUSY PRESCRIBER.

Price 10s. 6d. net; post free (inland) 10s. 10d.

SQUIRE'S POCKET COMPANION to the BRITISH PHARMACOPŒIA.

"*The POCKET COMPANION shows evidence of considerable judicious forethought in the selection of data likely to be of use to a wide class of readers.*"—THE LANCET.

Published by J. & A. Churchill, 7, Great Marlborough-st., London, W. 1.

BY P. LOCKHART-MUMMERY, F.R.C.S.

DISEASES OF THE COLON AND THEIR SURGICAL TREATMENT.

Numerous Illustrations and Coloured Plates. 10s. net.

Baillière, Tindall & Cox, 8, Henrietta-street, Covent Garden.

Now Ready. Crown octavo. 56 pp. Illus. Price 1s. net; by post 1s. 2d.

NOTES ON MILITARY ORTHOPÆDICS.

By PAUL BERNARD ROTH, F.R.C.S. "Should be in the hands of every surgeon on active service."—MEDICAL WORLD.
Henry Kimpton, 263, High Holborn, London, W.C.

Now Ready. Pp. xi. + 269. With 3 Charts. 5s. net.

ON ALCOHOLISM: Its Clinical Aspects and Treatment.

By FRANCIS HARE, M.D., Medical Superintendent of the NORWOOD SANATORIUM, Beckenham.
"Marked by candour, common sense, and moderation ..... likely to become the standard text-book."—BRITISH MEDICAL JOURNAL.
London: J. & A. Churchill, 7, Great Marlborough-street.

IN THE PRESS.

THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES IN GENERAL PRACTICE.

By L. W. HARRISON, D.S.O., Lt.-Col., R.A.M.C., Lecturer on Venereal Diseases, and Officer in Charge, Military Hospital, Rochester Row.
Demy 8vo. Cloth. About 500 pages, fully illustrated, with 16 Plates in Colour, and 80 Illustrations in the text.
Henry Frowde and Hodder & Stoughton, Oxford Press Warehouse, Falcon-square, London, E.C. 1.

SAUNDERS' BOOKS FOR THE PRACTITIONER.

See Saunders' Advertisement on Page 3.

Second Edition. 8 Plates and 36 Figs. Price 7s. 6d.

BELLAMY GARDNER'S SURGICAL ANÆSTHESIA.

"Its pages focus much valuable information."—BRIT. MED. JOUR.
London: Baillière, Tindall & Cox, 8, Henrietta-st., Covent Garden, W.C.2.

TWO USEFUL BOOKS by E. L. ASH, M.D., for those undertaking treatment of War Neuroses and allied Mental and Nervous Disorders:—

1. HOW TO TREAT BY SUGGESTION - - 1s. net.
2. MENTAL SELF-HELP - - - - - - 2s 6d. net.

Mills & Boon, 49, Rupert-street, London.

Now Ready. 2ND EDITION with new Preface. 2s. 6d. net (postage 3d.).

SHELL SHOCK.

By Professor ELLIOT SMITH, M.D., F.R.S., and T. H. PEAR, B.Sc.
The University Press, Manchester, and Longmans, Green & Co., London.

Fourth Edition. With 22 Illustrations. Price 4s. net.

BLOMFIELD'S ANÆSTHETICS.

"A truly excellent manual."—LANCET.
London: Baillière, Tindall & Cox, 8, Henrietta-st., Covent Garden, W.C.2.

Demy 8vo. 21s. net.

AN INDEX OF PROGNOSIS AND END-RESULTS OF TREATMENT.

Edited by A. RENDLE SHORT, M.D., B.S. Lond., F.R.C.S. Eng., Hunterian Professor, Roy. Coll. of Surgeons.
WITH TWENTY-THREE COLLABORATORS.
"We have formed a high opinion of its value."—BRIT. MED. JOUR.
"Should be of great service."—LANCET.
Bristol: J. Wright & Sons Ltd. London: Simpkin & Co. Ltd.

H. K. LEWIS & CO. LTD., MEDICAL PUBLISHERS AND BOOKSELLERS.

Text-Books and Works in Medical, Surgical, and General Science of all Publishers.

Orders by Post or Telephone promptly attended to. Telephone: MUSEUM 1072.

CHRISTMAS HOLIDAYS, 1917—MONDAY, DEC. 24th, to WEDNESDAY, DEC. 26th, inclusive.

MEDICAL AND SCIENTIFIC CIRCULATING LIBRARY.

Annual Subscription, Town or Country, from One Guinea.

136 GOWER STREET and 24 GOWER PLACE, LONDON, W.C. 1.

THE THROAT
THE GERM
AND
THE LOZENGE

The warm moist condition of the throat being so favourable for the growth of Bacteria is a source of constant trouble to the Doctor.

He is constantly being asked, "Oh give me something to ease my throat."

Diet and treatment are necessary, but take time.

For immediate relief try "COFECTANT" LOZENGES; they are pleasant to the taste; they contain "COFECTANT," the most powerful germicidal fluid known; they are harmless and they kill germs, thereby relieving the hoarseness and soreness immediately, and leaving the Doctor to restore the patient to health in his own way and with greater comfort to both.

1/3 *Per Box from all High-class Chemists.*

EDWARD COOK & CO., Ltd., Bow, LONDON, E.3.

VALENTINE'S PREPARATION
NUTRIO PRIME
MEAT JUICE.
The result of an original Process of Preparing Meat, and extracting its Juice, by which the elements of nutrition are obtained in a state, ready for immediate absorption.
DIRECTIONS-Dissolve one teaspoonful of the Preparation in two or three tablespoonfuls of cold or warm water. The use of boiling water changes the character of the preparation.

Valentine's Meat-Juice

For **Quieting** the **Irritable Stomach**, for **Aiding** the **Digestion** and for **Sustaining** and **Strengthening**, **Valentine's Meat-Juice** is **Extensively Employed** in the treatment of

Phthisis.

Dr. Gouel, *Physician in Chief of the Villepinte Hospital for Consumption, Paris, France:* "VALENTINE'S MEAT-JUICE succeeds well in cases of Anæmia and in the treatment of Tuberculosis in an advanced stage when the stomach is intolerant."

Dr. Pietro Borromeo, *Physician and Surgeon of the Hospital of Rome, Italy:* "I have tried VALENTINE'S MEAT-JUICE in the Tuberculosis Division of the Hospital of the Holy Spirit, and have proved the great advantages that it renders for the nutrition of the consumptive. Pleasant to the taste of the most fastidious of the sick, it does not irritate the stomach, but stimulates the peptogastric functions so as to improve notably the appetite, even in cases of continuous and high fever and of extreme loss of strength."

For sale by European and American Chemists and Druggists.

VALENTINE'S MEAT-JUICE COMPANY,
RICHMOND, VIRGINIA, U. S. A.

D 116

THE LANCET.

No. 4920. LONDON, SATURDAY, DECEMBER 15, 1917. Vol. CXCIII.

CONTENTS.

The whole of the literary matter in THE LANCET is copyright.

A DISCUSSION on the Surgery of Exophthalmic Goitre. By T. P. DUNHILL, M.D., Lieut-Col., Australian Army Medical Corps; Surgeon to St. Vincent's Hospital, Melbourne.—(*Illustrated*)..... 883

ORIGINAL ARTICLES.

Nasal Reconstruction. With a Note on Nature's Plastic Surgery. By J. L. AYMARD, M.R.C.S., L.R.C.P. Lond., Captain, Royal Army Medical Corps (T.); late Plastic Surgeon, Cambridge Hospital, Aldershot; Ear, Throat, Nose, and Plastic Surgeon, the Queen's Hospital for Facial Injuries, Sidcup, Kent.—(*Illustrated*)..... 888

The Use of the Turbinals and the Septum in the Repair of Injuries and Defects of the Wall of the Nasal Cavity. By G. SECOMBE HETT, M.B. Lond., F.R.C.S. Eng., Lieutenant, Royal Army Medical Corps; Surgeon to Queen's Hospital for Facial Injuries, Sidcup, &c.—(*Illustrated*)..... 892

MEDICAL SOCIETIES.

ROYAL SOCIETY OF MEDICINE:

SECTION OF OBSTETRICS AND GYNÆCOLOGY:—Scopolamine Morphine Narcosis in Childbirth (Twilight Sleep) 897

HUNTERIAN SOCIETY:

The Medical Classification of Recruits 899

WEST LONDON MEDICO-CHIRURGICAL SOCIETY..... 898

REVIEWS AND NOTICES OF BOOKS.

Midwifery. By Ten Teachers. Under the direction of Comyns Berkeley, M.A., M.D., M.C. Cantab., F.R.C.P. Lond. Edited by Comyns Berkeley, H. Russell Andrews, J. S. Fairbairn..... 900

Psychobiology. Vol. I., No. 1.. 900

Veterinary Review. Edited by O. Charnock Bradley, M.D., D.Sc., M.R.C.V.S. Vol. I., No. 4..... 900

LEADING ARTICLES.

THE REPAIR OF THE NOSE AND JAWS 901

THE NURSING PROFESSION AND VOLUNTARY REGISTRATION... 902

ANNOTATIONS.

The Weekly Hours of Employment of Munition Workers 903

Serum Disease in Cerebro-spinal Meningitis and Diphtheria 903

The Intramuscular Injection of Calomel in the Enteric Fevers 904

Eye-strain and the Cinema 904

Nephritis in the Belgian Army 904

Infant Mortality in India 905

Malaria Problems 905

The Care of the Blind 906

Medical Insurance Agency..... 906

INDEX NOTICE.

THE LANCET, VOL. II., 1917..... 906

URBAN VITAL STATISTICS:

English and Welsh Towns.... 903

Scotch Towns..... 904

Irish Towns..... 909

SPECIAL ARTICLES.

The Belgian Doctors' and Pharmacists' Relief Fund..... 907

Medical Research Committee. The Third Annual Report.. .. 907

Paris: The Inter-Allied Surgical Congress.—Frostbite as a Factor in the Development of Tetanus.—The Control of Secret Remedies 908

The Services: Royal Naval Medical Service.—Army Medical Service.—Royal Army Medical Corps.—Journal of the Royal Army Medical Corps..... 912

CORRESPONDENCE.

Intramuscular Injections of Quinine Bihydrochloride in Simple Tertian Malaria (Mr. Stephen C. G. Fox) 909

The Retraction of Blood Clots (Major T. G. M. Hine, R.A.M.C.) 910

The Value and Limitations of Sanatorium Treatment (Dr. Edward G. Glover)..... 910

Sir Richard Croft and the Case of the Princess Charlotte (Dr. S. D. Clippingdale) 911

Success and Failure in the Treatment of Tuberculosis (Dr. Louis Cobbett) 911

Collosol Cocaine (Mr. Lewis Stroud) 911

Surgery in Jerusalem Over 3000 Years Ago 916

A Curious Action of Mercury on Aluminium (Captain M. H. Fleming, R.A.M.C.)..... 917

THE WAR.

The Casualty List..... 913

Casualties among the Sons of Medical Men 913

Lord French's Despatches..... 913

Hospital Accommodation for Pensioners 913

Travelling Medical Boards..... 913

Improvements in Hospital Accommodation in India 913

MEDICAL NEWS.

Memorial Service in London for the late Dr. Elsie Inglis 883

Sanitary Conference at Karachi 906

Belfast Medical Students' Association 907

Royal College of Physicians of Ireland 913

Royal Institution 913

Appointments in India 913

Donations and Bequests 913

The Wandsworth and District Non-Panel Association 913

Brighton Hospital Sunday Fund 913

Medical Magistrate 914

Workmen's Dwellings at Bristol 914

Presentation to a Medical Man 914

Bombay War and Relief Fund.. 914

PARLIAMENTARY INTELLIGENCE.

Notes on Current Topics: National Health Insurance Bill.—Milk for Children and Invalids 914

House of Commons: Dispensers in Military Hospitals.—Midwives (Ireland) Bill.—National Insurance Grants.—York Practitioners and Treatment of Invalid Soldiers—Care of the Blind in Ireland.—Panel Practitioners and Invalided Soldiers.—Surgeon Probationers in the Navy.—Accommodation in Civil Hospitals..... 914

VILLAGE SETTLEMENTS FOR THE CURE AND TRAINING OF DISABLED EX-SERVICE MEN..... 915

Appointments.—Vacancies. 915

Births, Marriages, and Deaths... 916

Books, &c., received..... 916

Notes, short Comments, and Answers to Correspondents... 916

Medical Diary 917

Editorial Notices 917

Manager's Notices..... 918

Meteorological Readings..... 918

Acknowledgments of Communications received 918

FOR INDEX TO ADVERTISEMENTS SEE PAGE 2.

MATERNITY AND CHILD WELFARE. A Monthly Journal for Workers among Mothers and Children. 6d. net; post free 7d. Annual Subscription 6s. post free.

LABORATORY STUDIES IN TROPICAL MEDICINE. By C. W. DANIELS, M.B. Cantab., F.R.C.P. Lond., and H. B. NEWHAM, M.D. Durh., M.R.C.P. Lond., D.P.H. and D.T.M. & H. FOURTH EDITION. Demy 8vo. 21s. net; postage, inland 6d., abroad 1s. 2d.

THE FUTURE OF THE DISABLED SOLDIER. By C. W. HUTT, M.A., M.D. Cantab., D.P.H. Oxford. Crown 8vo. 6s. net; postage 6d.

THE ANIMAL PARASITES OF MAN. By H. B. FANTHAM, M.A. Cantab., J. W. W. STEPHENS, M.D. Cantab., and F. V. THEOBALD, M.A. Cantab. Royal 8vo. 45s. net; postage, inland 9d., abroad 3s. to 6s. 6d., according to destination (weight 4½ lbs.).

CLINICAL SURGICAL DIAGNOSIS FOR STUDENTS & PRACTITIONERS. By Professor F. DE QUERVAIN. Royal 8vo. 35s. net; postage, inland 7d., abroad 2s.

JOHN BALE, SONS & DANIELSSON, Ltd., 83, 85, 87, 89, & 91, Gt. Titchfield St., Oxford St., London, W.1.

INDEX

MEDICAL AND OTHER BOOKS AND PUBLICATIONS

PAGE

BAILLIERE, TINDALL & COX:—
Bellamy Gardner's Surgical Anæsthesia ... Cover i
Blomfield's Anæsthetics ... Cover i
Lockhart Mummery—Diseases of the Colon ... Cover i
Martinier & Lemerle—Facial Injuries ... Cover i
Tinel's Nerve Wounds .... Cover i

BALE, SONS & DANIELSSON:—
Daniels & Newham—Laboratory Studies in Tropical Medicine ... 1
De Quervain—Clinical Surgical Diagnosis ... 1
Fantham, Stephens, & Theobald—The Animal Parasites of Man 1
Hutt—The Future of the Disabled Soldier ... 1
Maternity and Child Welfare 1

CHURCHILL, J. & A.:—
Berkeley and Bonney—Difficulties and Emergencies of Obstetric Practice ... 5
Crofton—Therapeutic Immunisation ... 5
Frazer—Anatomy of the Human Skeleton ... 5
Ghon—Primary Lung Focus of Tuberculosis in Children ... 5
Goodhart & Still's Diseases of Children ... 5

PAGE

CHURCHILL—(Continued).
Hardwicke—Sight-Testing ... 5
Hare—Alcoholism ... Cover i
Jellett—A Short Practice of Midwifery ... 5
Latham and Torrens—Medical Diagnosis ... 5
Morris's Human Anatomy ... 5
Sequeira—Diseases of the Skin.. 5
Smith—The Cure of Obesity, &c.. 5
Squire's Pocket Companion to the British Pharmacopœia .. Cover i
Starling—Physiology ... 5
Thresh—Water Analysis ... 5
" Examination of Waters and Water Supplies ... 5
Thresh—Preservatives in Food .. 5
Turner & Stewart—Text-Book of Nervous Diseases ... 5
Wrench—The Healthy Marriage.. 5

FROWDE AND HODDER & STOUGHTON:—
Harrison—Diagnosis and Treatment of Venereal Diseases Cover i

HILTON & CO.:—
Ghosh & Das—Hygiene and Public Health ... 4

KIMPTON:—
Roth—Notes on Military Orthopedics ... Cover i

PAGE

MACMILLAN & CO. —
Godlee, Sir R. J.—Lord Lister.... 4
Luciani—Human Physiology 4
New System of Gynæcology 4

MEDICAL PUBLISHING CO:—
Lane, Sir A.—Operative Treatment of Fractures ... 6

MILLS & BOON:—
Ash—How to Treat by Suggestion ... Cover i
Ash—Mental Self Help .... Cover i

SAUNDERS COMPANY:—
Hill & Gerstley—Infant Feeding.. 3
McKenzie—Exercise ... 3
Ruhrah—Diseases of Children .. 3
Saunders' Books for the Practitioner ... Cover i
Stelwagon—Diseases of the Skin.. 3
Stevens—Practice of Medicine .. 3
Vecki—Sexual Impotence 3

UNIVERSITY OF LONDON PRESS:—
Babinski & Froment—Hysteria .. 7
Bellasty—Nerve Lesions ... 7
Broca—Wounds of the Bones, &c. 7
" Artificial Limbs ... 7
Carrel & Dehelly—Treatment of Infected Wounds ... 7
Imbert & Real—Fractures of the Lower Jaw ... 7

PAGE

UNIV. LOND. PRESS—(Continued).
Lagrange—Fractures of the Orbit and Injuries of the Eye in War. 7
Leriche—Treatment of Fractures. 7
Military Medical Manuals ... 7
Rouby & Lhermitte—Psychoneuroses of War ... 7
Thiberge—Syphilis and the Army 7
Vincent & Muratet—Dysenteries, Cholera, &c. ... 7
Vincent & Muratet—Typhoid Fevers, &c. ... 7

UNIVERSITY PRESS, MANCHESTER:—
Smith—Shell Shock..... Cover i

WRIGHT & SONS (BRISTOL):—
An Index of Prognosis and End-Results of Treatment Cover i
Index of Differential Diagnosis of Main Symptoms ... 4

MEDICAL LIBRARIES, &c.:—
Baker—Books ... 6
Behnke—Stammering, &c.... 4
Ketley—Stammering ... 6
Lewis & Co.'s Medical and Scientific Circulating Library. Cover i
Matthews—Wood: Appliances of Trusses to Hernia ... 4
Medical Correspondence College—Guide to Medical Examinations 47

OFFICIAL AND GENERAL ANNOUNCEMENTS

ASSISTANCIES, MEDICAL 54

ASYLUMS, HOMES &c.:—
Ashwood House, Kingswinford .. 49
Barnwood House Hospital..... 49
Bishopstone House, Bedford..... 49
Boggin, Tattershall, Lincoln 49
Brunton House, Lancaster..... 49
Camberwell House, Peckham-road 51
Clarence Lodge, Clapham Park .. 49
Colthurst House School, Alderley Edge 49
Coppice, The, Nottingham..... 50
Court Hall, Kenton, near Exeter. 50
Dalrymple House, Rickmansworth 51
Dartmoor Sanatorium 52
David Lewis Colony, Alderley Edge 49
Duff House, Banff ... 12
General Manager, Craven-street . 49
Ghyllwoods Sanatorium 51
Grove House, Church Stretton .. 50
Grove, The, Catton, Norwich 50
Haslemere Nursing Home ... 49
Haydock Lodge, Newton-le-Willows ... 51
Heigham Hall, Norwich 50
Littleton Hall, Brentwood..... 49
London Fever Hospital 50
Mailing Place, Kent 50
Melbourne House, Leicester 51
Mendip Hills Sanatorium 52
Moat House, Tamworth 50
Newmains Retreat, Lanarkshire.. 51
Nordrach-on-Dee, Banchory 52

ASYLUMS—(Continued).
Northumberland House, Finsbury Park ... 49
Northwoods House, Winterbourne 51
Peckham House ... 51
Pendyffryn Hall Sanatorium, Nordrach-in-Wales ... 52
Plympton House, Plympton 50
Portsmouth Corporation Mental Hospital... 49
St. Andrew's Hospital, Northampton ... 50
Shaftesbury House, Formby-by-the-Sea ... 51
Sharman, Beaumont-street 49
Springfield House Private Asylum, Bedford ... 50
Stretton House, Church Stretton. 50
The Grange, near Rotherham 50
Vale of Clwyd Sanatorium 52
Warneford Asylum, Oxford 49
Wye House, Buxton ... 50

FINANCIAL, &c. —
Equitable Reversionary Interest Society ... 47

HEALTH RESORTS, BATHS, &c.:—
Caterham Sanitarium 53
Smedley's, Matlock..... 53

HOSPITAL, INFIRMARY, SANATORIUM, &c., VACANCIES.. 53-54

HOUSE & ESTATE AGENTS:—
Monsam, Manchester-street 55
Robins, Hornsey ... 55

LIFE & FIRE ASSURANCES, &c.
Prudential ... 48

MEDICAL AGENTS:—
Fieldhall, Limited ... 55
Manchester Clerical, &c., Association ... 55
Medical Agency ... 55
Needes, J. C. ... 55
Peacock & Hadley ... 55
Turner ... 55

MEDICAL SCHOOLS (LONDON.):
London School of Clinical Medicine ... 48
West London Post Graduate College ... 48

NURSES' ASSOCIATIONS:—
Co-operation of Temperance Male and Female Nurses ... 48
Female Nurses Association 48
General Nursing Association ... 48
Hospital for Sick Children 49
London Nurses' Association ... 48
London Temperance Nurses' Co-operation ... 47
Mental Nurses Association ... 48
Mental Nurses' Co-operation 49

NURSES' ASSOC.—(Continued).
Misses Strongwick's Nursing Agency ... 49
New Mental Nurses' Co-operation 47
Nurses' Association ... 48
Nurses' Co-operation ... 48
St. John's House ... 49
St. Luke's Hospital... 49
Temperance Association of Male Nurses, Ltd. ... 48
Temperance Male Nurses Co-operation ... 47
The Retreat, York ... 47

OFFICIAL NOTICES:—
Brown Animal Sanatory Institution ... 48
City of London Lying-in Hospital 48
Incorporated Society of Trained Masseuses ... 48
London School of Tropical Med.. 48
Queen Charlotte's Lying in Hosp 48
Royal College of Surgeons of England ... 48
University of London, University College ... 48
York-road General Lying-in Hos.. 48

PARTNERSHIPS & PRACTICES. 55

RAILWAY & STEAMSHIP CO.'S.:—
Royal Mail Steam Packet Co. 47

TUTORS & LECTURERS:—
Medical Correspondence College. 47
Weymouth ... 48

TRADE AND MISCELLANEOUS ADVERTISEMENTS

AMBULANCES:—
Daimler Company—
Motor Ambulances for Hire 9
St. John Ambulance—
Invalid Carriages... 9

BOTTLE MERCHANTS:—
Isaacs ... 8

CARRIAGES, MOTORS, &c.:—
Armstrong—
Chauffeurs', Coachmen's, Footmen's Liveries ... 8
Offord & Sons—Ford Cars 9
Singer & Co., Ltd.—
Singer "10" Doctor's Car 9

CHEMISTS & DRUGGISTS:—
Allen & Hanburys—
Byno Cascada ... 21
Byno Hypophosphites ... 22
Allenburys Castor Oil ... 43
Angier Chemical Co.—
Angier's Emulsion ... 18
Anglo-American Pharmaceutical Co., Ltd.—
Betul Oil, Colchi-Sal ... 11
Pancrobilin ... 40
Anglo French Drug Co.—
Cupra e, Cyto-Serum..... 29
Antiphlogistine..... Cover iv
Battley & Watts—
Battley's Liquors ... 35
Boots Pure Drug Co.—
Chloramine-T, &c. ... 32
British Oxygen Co —Oxygen... .. 45
Browning & Co.—Semprolin Emulsion with Iron ..... Cover iii
Burroughs Wellcome & Co.—
Adrenalin ... 25
Aspirin ... 26
Salvar an, Neosalvarsan..... 27
Christy & Co.—
Glyco-Thymoline ... 19
Glyco-Heroin ... 42
Clay, Paget & Co.—Glycoiactophos 40

CHEMISTS—(Continued).
Cook & Co.—
Cofectant Lozenges .... Cover ii
Cooper Laboratory for Economic Research—
Phenol sulphone-phthalein 43
Duncan, Flockhart & Co.—
Tuberculins, Vaccines ... 15
Etablissements Poulenc Freres—
Stovaine ... 11
Ferber Ltd.—
Blenosan Capsules ... 42
Gale & Co.—Elixir Cresolis c. Heroin Co., &c..... ... 43
Heppells—
Prodonal, Jubol, Globeol, &c.. 17
Hewlett & Son—
Liq. Santal Flav. c. Buchu et Cubeb, &c. ... 40
Hoffmann-La Roche Chemical Works—Sedobral ... 14
Hogg & Son—
Protein Nerve Food ... 44
Hudson's Eumenthol Chemical Co.—Eumenthol Jujubes 41
Humphrey Taylor & Co.—Junora. 43
Maltine Manufacturing Co.—
Maltine, &c.... ... 31
Martindale—
Am l Nitrite Capsules ... 40
Moore & Co., Ltd.—
Lymm-Pure-Salt ... 44
Parke, Davis & Co—
Cod Liver Oil Emulsion ... 16
Raimes & Co Slinger's Nutrient Suppositories ... 44
Richards & Sons—
Antikamnia Tablets ... 34
Lactopeptine ... 34
Sapon Soaps Limited—
Sapon Soaps ... 13
Southall Bros. & Barclay—
Aldemin, Lycresol, &c. ... 20
Squire & Sons—
Glyphocal, Ferocal ... 24
Wilcox, Jozeau & Co.—
Koia Astier ... 42

DISINFECTANTS:—
Condy's Fluid ... 45
Quibell Bros Kerol... 41
Sanitas Co., Ltd —
Sanitas Fluid, &c. ... 30

FOODS —
Allen & Hanburys—
Allenburys Foods ... 23
Aylesbury Dairy Co.—
Humanized Milk... 45
Benger's Food ... 10
Blatchley's Diabetic Preparations 45
Carurics & Co —
Liquid Peptonoids ... 31
Freemans Distinctive Ready Soups ... 44
Glaxo ... 55
Hommel's Hæmatogen ... 55
Lyons & Co.—Colesco... 12
Southall Bros & Barclay—Vitafer 20
Thew, Hooker & Gilbey, Ltd.—
Malted Milk ... 45
Valentine's Meat-Juice ... Cover ii
Van Abbott & Sons — Gluten Bread, &c. ... 45

FURNITURE, &c.:—
Carters—Furniture for Invalids and Hospital Supplies ... 37

HOSIERS, &c.:—
Wolsey Underwear Co.—
Wolsey Underwear ... 56

HOSPITALS (ISOLATION):—
Humphreys, Limited—
Hospital Buildings, &c. ... 39

MED. & SURG. APPLIANCES:—
Arnold & sons—New Patent Phonophore Stethoscopes 38
Bailey & Son—
Surgical Instruments .. Cover iii
Davis—Lukens Sterile Catgut.... 8
Davis & Geck—Kalmerid Catgut. 45

MED. APPLIANCES—(Continued).
Favarger & Co.—Albee Electro-Operative Bone Set... 37
Hoefticke—
Extension Appliances ... 23
Johnson & Phillips Ltd.—
New Metal Tourniquet ... 56
Medical Supply Association—
Bergonié System of Treating Obesity ... 33
Millikin & Lawley—Osteology, &c. 8
Norwich Crape Co.—
Norwich Crêpe Bandage ... 8
Robinson & Sons—
Gamgee Tissue ... 44
Timpson & Co.—Ligatures 34
Wormull—System of Aluminium Splinting ... 35

MINERAL WATERS, &c.:—
Contrexéville Pavilion..... 44
Davis & Davis—Natural Mineral Waters ... 45
Vichy-Célestins ... 35

OPTICIANS:—
Watson & Sons, Ltd.—
Hæmacytometers ... 9

TAILORS, BOOTMAKERS, &c.:—
Dowie & Marshall—
Hygienic Bootmakers ... 38
Harry Hall—Service Dress 6

TOBACCO, CIGARS, &c.:—
Player & Sons—
Perfectos Cigarettes ... 44

VACCINE LYMPH:—
Chaumier's Calf Lymph ... 45

WINES, BEER, SPIRITS, &c:—
Humphrey Taylor & Co.—
"G. B." Diabetes Whisky 45

MISCELLANEOUS:—
M.O., Barry—Exchange ... 54

A Discussion
ON
THE SURGERY OF
EXOPHTHALMIC GOITRE.

By T. P. DUNHILL, M.D.,
LIEUTENANT-COLONEL, A.A.M.C.; SURGEON TO ST. VINCENT'S HOSPITAL, MELBOURNE.

Methods of Treatment.

IN recent years divergent opinions have been expressed and written as to what is the best method of treatment for exophthalmic goitre.

I. It has been said that operation is the rational treatment, if one regards the manifestations of the disease as due to excessive activity of the thyroid gland. As one authority [1] has said: "If we could be certain that the essential and fundamental cause of the disease is the hypertrophy and over-activity of the thyroid gland, the most rational method of treatment would obviously be to reduce the enlarged gland to something like normal proportions by surgical means." Of those who hold this view some have regarded the operation itself as hitherto too dangerous to justify it being undertaken. The same authority at one time said: "Were it not for the considerable risk of life from the operation, I should not hesitate to recommend it as the most rational and practical method of treatment of the disease."

II. Others [2] have maintained that Graves's disease, as we know it, is not essentially due to thyroid gland activity, and therefore surgical treatment is theoretically wrong and practically useless.

III. Some think that the disease may be more successfully treated without operation. Rupert Farrant [3] has said that if hyperthyroidism were recognised and treated one to three years earlier Graves's disease would cease to exist. Hernaman-Johnson [4] and others say that the treatment should be by X rays.

IV. Kocher, the Mayos, Crile, and the writer believe that the disease can be practically cured by the removal of sufficient thyroid tissue when there has not been visceral degeneration, and can be greatly ameliorated in most cases even when this has occurred.

As I have now performed the operation for removal of thyroid tissue about 1500 times, I propose in the present communication to state what my own experience has been.[5] From half to two-thirds of the number have been cases of Graves's disease. Writing from a military hospital abroad I have not access to my records, but within a narrow margin my numbers are accurate. I have lived for a period of 11 years in the same town or State as most of my patients, and I have kept in communication with almost all of my private patients.

The Case for Operation.

The time seems opportune to present the case for operation, and to discuss what can be done by surgical methods. I take it that everyone wishes to get at the truth of the matter. He will not desire because he is a physician that the treatment should be solely medical, or because he is a surgeon that the treatment should be solely surgical, but in each case it will be his aim that the patient shall have that form of treatment which is most likely to bring about a cure. It ought to be possible to obtain some unanimity of observation among men who are working along different lines to the same end. If experiences could be exchanged; if, above all, men of divergent views could see the same cases before and after treatment, or before and after operation, it should help.

Surgeons, as well as physicians, recognise that the removal of a large portion of a gland which is so essential to the bodily well-being as is the thyroid is a confession that the origin of its disturbances has not yet been discovered. But while recognising this, they maintain that the *manifestations* of Graves's disease are the manifestations of excessive and disordered functional activity of the thyroid gland. Working on this hypothesis, they believe that, when other means have failed, sufficient gland tissue may be removed to place the patient on a greatly improved plane of health, while still leaving ample for physiological purposes.

Physicians may pronounce against operation for two different reasons. Some think that operation gives no better results than medical treatment (using medical treatment in its widest application). Others, while recognising that removal of thyroid tissue favourably modifies the disease, consider that the risk of operation is too great: either the immediate risk of operation or the ultimate risk of insufficiency of thyroid. Their judgment is based partly on the result in their own cases which have been sent for operation and partly on the analysis of the published reports of surgeons. Some physicians send their cases for operation when a patient is losing ground, or if a reasonable trial of medical treatment fails to place a patient on an industrial plane.

We owe it to the multitude of sufferers from this disease—for there are a great many—that our minds should be free and open; not only that we should give every method of investigation and treatment its proper consideration and trial, but also that we should not persist in any method to the danger of the patient's life or to the detriment of the patient's welfare. In this article I shall briefly review my own position, stating the reasons that have led me to this position, and quoting cases to illustrate main points. Afterwards I will discuss some of the opinions differing from my own.

Reasons for Operating.

First, as regards reasons for operating. Eleven years ago, when in charge of an out-patient department, I happened to have under my care five or six patients with exophthalmic goitre who were not making progress. Then one other patient came who was very ill indeed. She had been an inmate of a hospital for some months and had had all the treatment that could be given. That patient brought me face to face with the position that something had to be done or she at least was going to die. That was the first outstanding observation. I was given the opportunity of operating upon her. The problem of safety of operation arose. I knew that some cases had been improved in health by operation. I also knew that some cases had died at, or as the result of, the operation. Kocher had published his earlier papers about operation under local anæsthesia. It seemed to me that along the lines of infiltration anæsthesia, together with lightness of handling and rapidity in operating, would lie the greatest measure of safety. For at that time it certainly was not a safe operation. I operated upon this woman, removing the right lobe. She so rapidly lost all the worst of her subjective symptoms and suffered so little discomfort from the operation itself that the other patients who had been associated with her in the out-patient room, on seeing her after the operation, one by one wished to be operated upon. They were all operated upon and all without general anæsthesia, and none of them died. Whatever may be my views now, there was no doubt in my mind then, nor was there in the minds of the physicians who saw these cases, that the infiltration with local anæsthetic was the chief factor in making for the safety of the operation. Nor is there any doubt that, in those days at any rate, it was the knowledge that the operation could be performed without general anæsthesia which mainly induced patients to present themselves for operation and physicians to permit their patients to undergo operation. To most of these points it will be necessary to recur, but for the moment the record of the evolution of one's position is being traced.

Results Depend on Removing Sufficient Thyroid Tissue.

In 1907 A. Kocher wrote: "We find it rarely necessary to resect a part of the remaining gland after excision of one side. We have cured by our operation the patients in 83 per cent. of all our cases."[6] After some months I knew that this was not going to be my own experience except in some cases that were very mild. The worst cases gave the most striking results so far as they went. But these results were far short of cure. The psychical unrest would disappear, as would the feeling of tenseness and strain in the eyeballs. Much of the tremor and the consciousness of arterial throbbing would vanish. If there had been amenorrhœa there would be restoration of the menstrual function;

[1] Hector Mackenzie: System of Medicine, Allbutt and Rolleston, Vol. IV., Part I., 1908. pp. 383, 384.
[2] McCarrison: The Thyroid Gland. London: Baillière, Tindall, and Cox, 1917–1911–1912.
[3] Proc. Roy. Soc., Surg. Sect., p. 121.
[4] Pract., July, 1917.
[5] See also THE LANCET, 1912, i., 422.
[6] The Surgical Treatment of Exophthalmic Goitre, Jour. of Am. Med. Assn., Chicago, 1907, xlix, 1240–1244.

there would be some reduction in pulse-rate, but not to normal; there would be less palpitation, but it would not disappear completely; there would be improvement in colour and almost always gain in weight. Often there would be improvement in growth of hair if this had been thin.

This constituted a great improvement in the patient's condition, but it was not a cure. If it was left at that, and the patient returned to work, there was frequently a return of the distressing symptoms. This was not a satisfactory position for the patient or for the surgeon.

The return of symptoms is readily understood. The remaining lobe still is usually greater than the whole of the normal gland, and it is more active. Also, ligature of its arteries has never, in my experience, made the slightest difference in the size or activity of a lobe. Within the first six months of beginning to operate one had realised that removal of more gland substance than one lobe was necessary, if one was to place a patient on an "industrial" plane. I then decided to remove a portion of the second lobe when necessary, working from below upward, so as to remove the larger lower pole, while leaving the smaller upper pole with its feeding vessels absolutely undisturbed.

I now found that the percentage of cases practically cured was high; that girls were able quickly to go back to their work and to enjoy their recreations; they completely lost the feeling of bodily heat, and palpitation; their pulse-rates became normal. Still, even after a second operation, in a very small percentage of cases operated upon, it would happen that while almost all the symptoms had disappeared some few, or only one symptom would remain. Generally, in these latter cases, one would recognise that the upper remaining portion of the lobe was obviously bigger than one had judged at the second operation. For, as has been said above, the portion of gland to be left is never dislodged from its position, even to see how big it is. I have written before about the tongue-like process which frequently passes behind the trachea from the posterior border of the gland.[7] Thus one is not able to judge quite accurately. Moreover, the patients are sometimes desperately ill. It is always essential in such cases rapidly to make up one's mind how much it is safe to remove, and very rapidly to complete what one has decided to do. The immediate safety of the patient is always the first consideration. On the other hand, it has sometimes seemed as though there were no excess of gland tissue remaining, no prominence over the remaining part of the upper pole. And yet on operating one has found a mass of thyroid tissue as big as a hen's egg partly behind the larynx and partly behind scar tissue in the neck. The complete recovery from the remaining symptoms after the removal of portion of this—while still leaving sufficient for physiological purposes—is most striking.

To recapitulate: I have always found that removal of one lobe and the isthmus gives improvement which is readily recognised by both patient and observer. The removal of rather more than half the remaining lobe almost always places a patient on a plane of health which enables her to work and play and to feel well whilst doing so. Occasionally a third operation is necessary. When necessary it is generally because one has not been able to judge how much was left at the second operation. The reason one is not able to judge is because the portion to be left is never dislodged.

Illustrative Cases.

I have selected the following cases to bring out certain points. Each two cases are chosen to illustrate one striking symptom or aspect. In some, the photographs show this best (although the photographs were only taken for the interest, at the time, and not for publication). In others, the history is such that it is convincing.

Cases with Much Emaciation.

CASE 1 (Fig. 1A) is that of a woman who had suffered from exophthalmic goitre for about two years. She had had treatment all the time, and had been in a nursing home for about six weeks before I saw her. The photograph speaks for itself as regards the emaciation. The tremor was typical, and in this case the pulse was almost uncountable. There was much vomiting at intervals all through the illness following, but not preceding, its onset. There had been amenorrhœa for nine months. All that could be done by medical treatment and by rest in bed had been done, and the patient was becoming worse. There was no source of toxic absorption that could be detected. Teeth, tonsils, accessory sinuses, bowels, generative organs were apparently healthy. Rest in bed had been carried out, and the patient was obviously nearing the end. With novocaine infiltration anæsthesia I removed one lobe and, later, half the other. I append a photograph (Fig. 1B) of the same woman some months later. These photographs scarcely need comment. One could not conceive a woman more ill than this one was. She is now looking after her husband and is performing her household duties.

CASE 2.—With her I will class a nursing sister (Fig. 2), whom I was asked to see by Dr. W. Pasteur, senior physician to the Middlesex Hospital, London. This sister became ill during the latter half of 1916 and was invalided from her duties. After a period of rest she returned to duty. In 1917 she became much worse, and even after three months' complete rest in bed she was too ill to travel home. Dr. Pasteur gives me permission to state that, when he asked me to see her, he told me that he considered her too ill for operative interference. She had lost 5 stone in weight. The eyes were staring. The pulse-rate, as shown by the chart which I append, was frequently over 150, and not infrequently over 160, after having been for some weeks in bed. The tremor was typical, and she was acutely distressed by the constant sensation of internal pulsation. She had much gastro-intestinal unrest, with severe attacks of vomiting, following, but not preceding, the onset of Graves's disease. The patient had been in bed for 12 weeks. The weight had fallen from 12 stone to 7 stone. This sister had formerly been able to lift up another sister horizontally in her arms. Her muscular weakness was now extreme and she was dangerously ill. She was operated upon on May 25th under novocaine infiltration anæsthesia. In five days all abnormal sensation of pulsation had disappeared. The appetite was good. The patient was a happy woman, but the pulse was not normal. This woman is compelled to earn her own living as a nursing sister. If she had returned to work without more being done the symptoms would have recurred, because only one lobe had been removed. There remained still a distinct isthmus and the right lobe. Almost always the isthmus is removed with the first lobe. This woman was far too ill for anything more than the minimum to be done at the first operation. On June 15th I removed the enlarged isthmus and the lower half of the right lobe. I publish the chart of this case. It shows that on the eighth day after the second operation—that is to say, almost at once after sufficient gland had been removed—the pulse dropped to the eighties and remained there. It rose to 120 on one day for a few hours only, the day when her menstrual period was due. Since then it has never been raised. It is now in the sixties in the morning and in the eighties at night after being up and about. I append two photographs of this woman (Fig. 2A and Fig. 2B), one taken ten days after the second operation, whilst she was still emaciated, and one taken three months afterwards. She is still gaining weight every week.

These two cases are published, with their photographs, to show the degree of emaciation which may occur, to show that even in these cases the operation can be performed with reasonable safety, and to show the obvious improvement after a sufficiency of gland tissue has been removed. All tremor has gone; all feeling of eye-strain has gone. All palpitation and sweating have gone, and the patients feel completely placid and restful. Their pulse-rates are normal.

Cases with Extreme Proptosis.

I will now speak of two cases in each of which the proptosis was so extreme that the conjunctiva became œdematous and overhung the lower lids. It appeared as though it were strangulated. The eyelids could not be closed voluntarily. In one ulceration through the cornea of one eye occurred with extrusion of the lens. In both the eyelids were stitched together for a period.

CASE 3.—Miss J. (Fig. 3) was a stout woman, and she had lost no flesh, but she was very ill. There was tremor and the pulse-rate was very rapid. The exophthalmos was extreme, the conjunctiva in each eye being œdematous, and overhanging the lower lid as though it were strangulated. I removed one lobe of the thyroid gland and the patient was improving, when she got an attack of influenza and bronchitis. The constant coughing, together with the associated coryza, made the eyes much worse somewhat suddenly. The cornea of one ulcerated, and in spite of constant attention by an ophthalmologist the ulcer deepened in the œdematous and inflamed conjunctiva, and extrusion of the contents of the eyeball occurred. I removed half the second lobe to lessen the absorption of the thyroid secretion, and Dr. Edward Ryan sutured together the eyelids of the remaining eye in order to protect the cornea. The pulse-rate dropped to the eighties and the sound eye receded. When it was judged safe the eyelids were separated and then the disorganised eye was enucleated. It was long before the corneal haze disappeared from the sound eye, but now she can read well. A glass eye has been fitted, and one would not know that she had ever suffered from exophthalmic goitre. She lives her normal life.

[7] Med. Annual, 1913, and Brit. Med. Jour., 1909, 1222-1225.

Fig. 3A is not in good focus, but it shows the salient features. The bulging forward of the eyes above the lower lid can be seen and the raising of the outer half of the eyebrow. It was taken after the first operation. Fig. 3B shows the same woman now.

I want to mention briefly a similar case.

CASE 4 was that of a man whose eyes were proptosed to such an extent that the conjunctiva was œdematous and bulging beyond the eyelids. His legs, thighs, and lower part of his abdomen were dropsical and œdematous from the heart failure; the apex beat was three-quarters of an inch outside the nipple line and the pulse was extremely irregular. The goitre was very large, as I have frequently found it in men who suffer from Graves's disease. I will not go into the details of the operation more than to say that I was compelled to remove what was necessary in three stages. The gland was so big, so friable, and so very vascular—the hæmorrhage being very severe on cutting across the gland tissue—that each time it was imperative very rapidly to remove just what one felt one safely could. Quite a large piece was removed each time. What remained after the second operation appeared to be as large as a cricket-ball. A severe cold with much coughing supervened immediately after the third operation. He could not voluntarily close his eyelids, and the œdematous, bulging conjunctiva became inflamed. The cornea became hazy from exposure. The conjunctiva appeared to be strangulated. As in the last case, the eyelids were sutured together to protect the eyes. This was done by Dr. Ryan.

The eyes receded a great deal and the lids were separated. The heart's apex has come in considerably, the œdema of the body has completely disappeared, leaving lineæ albicantes. The pulse remains irregular, but not unduly fast. In this case there was, of course, an advanced grade of visceral degeneration, as shown by the dilated heart, the irregular pulse, the back pressure with ascites and œdema. One cannot cure where heart muscle has become degenerate, but having removed the poisoning agent it is wonderful what power of recuperation a heart even in this state has. The improvement begins immediately sufficient gland has been removed. I publish his photograph (Fig. 4). It was not possible, in separating the eyelids, to divide between the lashes of the upper and lower lids. The separation had to be done partly at the expense of the lower lids. This is seen to be particularly the case in the outer half of the lower lid, but the upper lid is seen to come well down over the upper margin of the iris. I regret that I have not a photograph of this man before operation to show the proptosis, but he was far too ill.

It may not appear to be worth while to do this amount of work for a result which, in a case of visceral degeneration, cannot be perfect. But it has transformed a man who was a bedridden dropsical wreck, with eyes almost out of his head, into a man who is able to walk about freely, and to be a comfort to his wife and child.

I have published the notes of these two cases to show that the eyes may recede, if sufficient gland tissue is removed, even when the proptosis has been extreme.

The last patient belongs to a class of cases which most writers regard as unsuitable for operation, chiefly on account of the danger of operation, but also because the extent of visceral degeneration is thought to preclude any considerable degree of improvement. I can state definitely that great improvement follows operation if the gland is still in a state of increased activity, and I have never lost a case of this type of operation. It goes without saying that for this type local anæsthesia is absolutely essential.

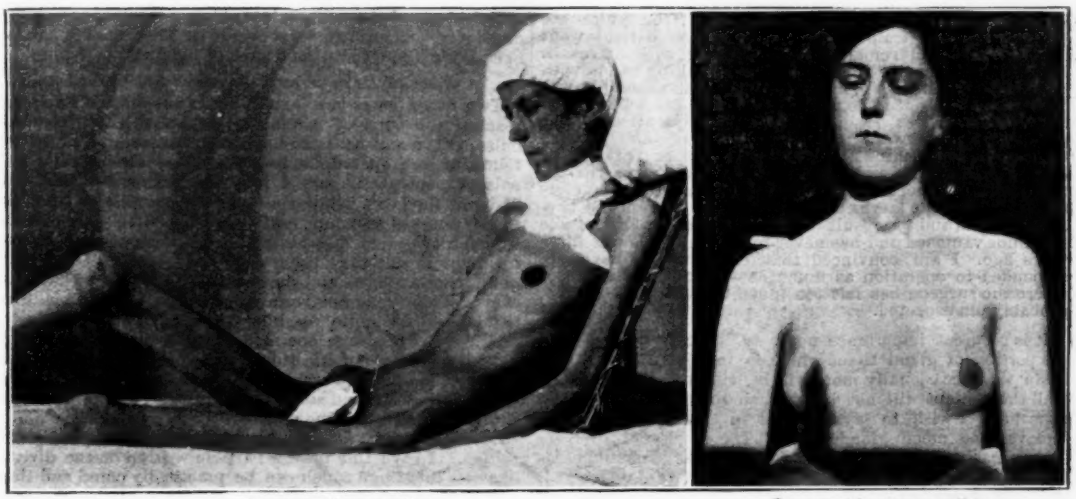
Cases showing Need of Removing Sufficient Gland Tissue.

I wish to speak of two cases, in each of which it was necessary to operate a third time, in order to get rid of some one remaining symptom.

CASE 5.—Miss M. was a healthy girl in the early twenties, when she developed exophthalmic goitre. The goitre, the prominence of the eyes, the tremor, the rapid pulse and the palpitation, were all characteristic. The first operation was one of the first six that I performed for this disease (1906). Consequently I removed only one lobe. She was improved, but remained far from well. This was the first case which compelled me to recognise that removal of one lobe was not going to cure, and I removed a part of the second lobe. After the second operation she lived a fairly active life, but she still had a large piece of gland tissue remaining in the region of the upper pole of the left lobe and was not free from tremor and palpitation. Her eyes had become practically normal after the second operation. I decided to remove still some more. This I did, and within a few days she felt quite a different being. Her eyes are now normal, her pulse is normal, she has no tremor and no palpitation. She has undertaken a tour on foot, lasting five days, over mountains, carrying a knapsack, and sleeping at nights in ordinary accommodation houses. She plays tennis regularly and is quite well. This was not due to rest in bed or medical treatment. Each time she entered hospital the night before the day of operation. As soon as *sufficient* gland tissue was removed she was completely better. Ten years later her health is normal. She is a vigorous woman.

FIG. 1A.

FIG. 1B.

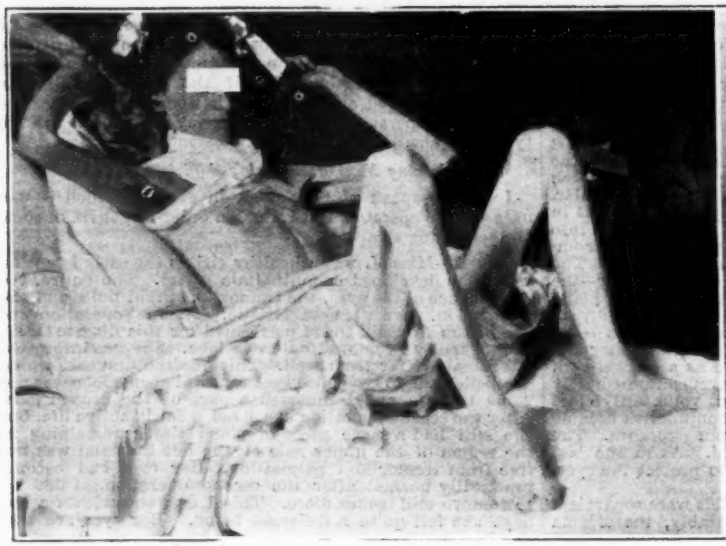


Case 1.—Before operation. Some months after operation.

The effect of the third operation in the next case of which I shall speak is most striking. A typical case, she was first operated upon by a colleague of mine and one lobe was removed. She considered herself sufficiently better to dance and do housework. During the absence of her surgeon abroad she became worse. The heart dilated, with the apex beat well outside the nipple line, and the pulse became irregular. The remaining lobe, always the larger of the two, was very big.

It was necessary to operate, because one saw her becoming steadily worse. Rest in bed had no effect. Two-thirds of the remaining lobe were removed. Following this, the eyes, which had been decidedly proptosed, became normal. The pulse lost all irregularity except on the rarest occasions. The apex of the heart came to within the nipple line and the pulse rate fell to normal. But the tremor remained and was most distressing. There appeared to be no excess of thyroid gland tissue, and for about two years I watched her

FIG. 2 A.



Case 2.—Taken ten days after operation.

FIG. 2 B.

Three months later.

in this condition. The eyes were normal, the pulse-rate normal, but the tremor was obvious. The patient went into hospital and remained there resting without result. Drugs did not control the tremor. On shaking hands with her she gave a firm grip, and one felt the vibration. It was then decided to open the neck through the old incision and to see if there was not, as one had so frequently found, a prolongation backwards from the upper pole and postero-internal border behind the larynx and upper part of the trachea. I did this, and discovered that there was a piece of the thyroid tissue, as big as a small hen's egg, completely hidden behind the larynx and the trachea. I removed two-thirds of this and the result was most dramatic. Every trace of tremor vanished and has never returned. This was three years ago. I am convinced that cases which have not responded to operation as much as was expected are cases where the surgeon has left too much thyroid tissue behind, probably unsuspected.

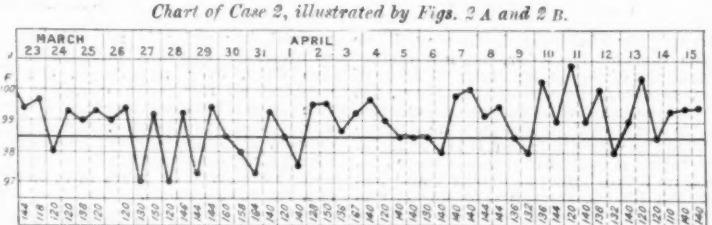
It is of great importance never to dislocate—or handle—the portion of gland tissue which is to be left. This will mean that occasionally more will be left than one suspects, and the patient will not be as much improved as one had expected. I wish to say here that in this case I probably removed too much gland tissue. The results of this are that occasionally this patient feels slight rheumatic pains in the right wrist. There are no other symptoms of deficiency, and one grain of dried thyroid tissue a day clears up the wrist pain when present. One might doubt the connexion if it were not for the effect of the administration of the small dose of gland tissue. The proptosis, irregular heart-beat, palpitation, and tremor, which made her very ill, are all gone, and she now lives a very active life, with the sole discomfort of occasional stiffness or slight pain in one wrist. Strangely enough it is only in the one wrist.

The preceding two cases are recorded to show how necessary it is to remove sufficient gland tissue if one is to obtain a result approaching a cure. And yet one must never overdo it. There are few surgical operations where the same degree of judgment is required.

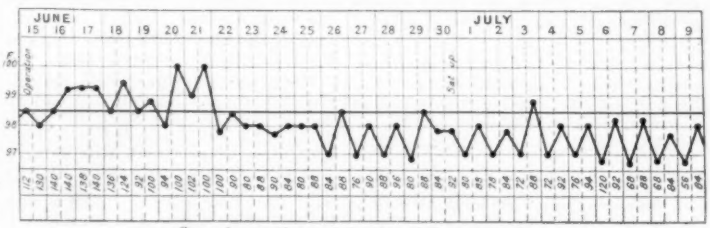
Disabled Cases Greatly Improved by Operation.

Two other cases are extremely interesting. Each had reached the stage of cardiac dilatation with irregularity of pulse. Each was operated upon as a last resort. These two, following the operations, have each lost all irregularity of pulse, except about once a fortnight. Then for from 12 to 24 hours the heart will begin to beat irregularly and to cause the greatest discomfort. After about 24 to 48 hours the irregularity ceases as suddenly as it began. For about a fortnight again they each work exceedingly hard, with a quite regular pulse, and they feel safe until the next turn comes. This may not seem a very good result, but these two cases were quite disabled before operation. One was bedridden. They were operated upon to try to prolong life, not with the hope of effecting a cure. After four years these two are still holding their own to the same extent. One manages an hotel and store. The husband of the other has gone to the war, and she manages her house and two children without a servant. This is the one who was completely bedridden. I have in a previous article written on the division of cases into those which can be practically cured and those which—through degeneration of cardiac muscle, as evidenced by irregularity of pulse, dropsy, or albuminuria — cannot be cured but may be greatly improved.[8]

Chart of Case 2, illustrated by Figs. 2 A and 2 B.



Three weeks before first operation.



Second operation and the three following weeks.

Further Discussion of the Case for and against Operation.

I have published more or less detailed notes of these eight cases to show what can be done, and done fairly safely, by one who has the requisite judgment and skill, and to show what measure of improvement may be expected to follow.

[8] Dunhill: Brit. Med Jour., May 22nd, 1909

In all the cases the patients were exceedingly ill. Six of them were so ill that few practitioners would have regarded them as having much chance of living, much less of improving. And these eight cases are selected from a great number of similar cases. In this article I am not giving detailed descriptions of the disease nor describing operations upon cases of the subacute or chronic type, cases that are holding their own without getting much better or worse. I have done that in previous articles.[9]

I do not say that every case should be operated upon, and I am far from saying that every case should be operated upon at once or even early. But I want both physicians and patients to know what can be done and how it can be done with reasonable safety.

Hale White states that 50 per cent. will be cured by ordinary medical means. I think it will be admitted that this 50 per cent. will include early and mild cases—cases which are still definitely Graves's disease—as seen by a physician in his private or hospital practice. When people begin to feel unwell they consult their family doctor or a physician, not a surgeon. Surgeons very rarely see early cases.

Of the operation results collected by McCarrison he puts down the average percentage of cures as 60. He says that this is not a sufficient improvement on the 50 per cent. cures due to medical treatment to justify the risk of operative mortality. I do not wish to argue on statistics, but it is necessary to point out that whilst the medically treated cases include all early and mild cases, the surgically treated cases are practically all cases which have come through the medical filter—i.e., they are cases which have only been permitted to come to the surgeon after medical treatment has failed to improve them. So that the 60 per cent. cured by surgical means is really 60 per cent. of the remaining 50 per cent. which medical treatment has failed to cure.

Marine and Lenheart, as a result of their histological work, state that:—

"The differences between the pulse-rate of the normal or colloid glands and of the most marked active hyperplasia are so slight as to bear no suggestion of any causal or effect relation. If any relation exists, the objective evidence would tend to indicate a hyposecretion rather than a hypersecretion, since the pulse-rate bears no relation to the amount of secreting surface, and a negligible relation to the histological structure of the gland."

One recognises the very high order of the work done by these two observers, yet it is difficult to make their findings accord with observed clinical facts. Removal of hyperplastic tissue causes an immediate drop in pulse-rate. The chart which I have published is that of a woman who had been in bed for a long time. She had had the best medical attention. She was not holding her own. Dr. Pasteur gave it as his opinion that she was too ill to stand operation. The chart after the operation speaks for itself. This can be observed in every case when once sufficient gland tissue is removed. The drop in the pulse-rate follows removal of tissue, and it follows quickly, and it follows when neither rest, nor medical treatment, nor elimination of toxic sources has been able to do it. And it follows when patients have reached the stage when surgical interference is, to say the least, a hazardous proceeding.

If in the case of a person severely ill with Graves's disease the state of the thyroid were hyposecretion the removal of three-fourths of the gland should cause myxœdema at once, and fairly constantly. Yet it never does, either immediately or later. On the contrary, one can show the loss of psychical unrest and a condition of physical well-being which, before operation, was foreign to the patient.

FIG. 3A. FIG. 3B.

Case 3.—Taken after first operation. Present day.

Results of Medical and Surgical Treatment.

McCarrison says:—

"There is no definite proof that the cures effected by surgical means (i.e., by hemithyroidectomy alone, or with ligation of arteries) are more lasting than those effected by medical means. As judged by these results hemithyroidectomy possesses little advantage over medical treatment. It may result in some amelioration of the symptoms, but this might reasonably be considered to be due in part to the enforced rest in bed."

One would like to point out in this respect that *hemithyroidectomy* is not the operation which is performed for the cure of Graves's disease. In 1909 I wrote in the *British Medical Journal* that it was necessary to remove portion of the second lobe (always leaving sufficient for physiological purposes).

Later, Halsted wrote of the necessity for partial *double* lobectomy for the cure of the disease. The Mayos and Crile have written similarly.

Hemithyroidectomy, even with ligation of arteries, has never, since 1907, been regarded as the operation for the cure of Graves's disease.

McCarrison also writes that it is no use swelling the literature with reports of cases "cured" by thyroidectomy without the fullest information concerning each case. The cases I have given are typical of the cases which come to the surgeon from the physician. I could multiply them indefinitely. Yet on carefully searching through McCarrison's book I am able to find only one case of Graves's disease from his personal experience with any details given.

FIG. 4. (Case 4.)

In the often slow evolution of the disease, in its very chronicity, lies the danger. The patient who is anxious to be better and the practitioner who is anxious to avoid operation may each be lured into thinking there is an improvement, or that, at least, the patient is holding her own, or that time is of no moment, while the best years of a woman's life are slipping by. Too often the apex of the heart is creeping out, visceral changes are taking place, and the proptosis is becoming permanent. The woman is ceasing to be able to occupy her usual position

[9] Dunhill: Brit. Med. Jour.; Proc. Roy. Soc., 1912; Med. Annual, 1913.

in the social order. I grant almost all that they say to those who, like McCarrison, state that the search for the cause should be relentless and unceasing. But while the cause is being sought for, patients must not be allowed to die, and more than that, they must not be allowed to lose the best years of their lives or to sink into a condition of visceral degeneration. One does not allow patients to die of appendicitis or of cancer whilst one is searching for the cause. They both have causes. The conditions which we call appendicitis and cancer are the results of some pre-existing cause. When the condition is established and is menacing life we deal with it as such, whilst all the time the search for the cause goes on. Some pre-existing condition pulls the trigger to start the thyroid on its dystrophic course. If the patient, though ill of the disease, is still well enough to be the subject of prolonged investigation, this should be done, and no stone should be left unturned to discover the cause But this course should not be obstinately persisted in to the peril of the patient The following incident is related to show to what extent the search for the cause may be pushed.

A woman of 24 years had all the cardinal symptoms of the disease. The eyes were greatly proptosed. She was being treated by a goitre specialist, who had followed the recent work on the septic origin of the disease. He had sent her to a rhinologist who had removed her tonsils. He thought this was not efficiently done, so he sent her to another to have them enucleated. Then a deflected septum was attended to. Following this, some of the accessory sinuses, ethmoidal or sphenoidal, were cleaned out. Next she had a prolonged course of X ray treatment. He then was about to compel her to have all her filled teeth extracted—which meant almost all her teeth—because "the disease is always due to a septic focus; you are not cured by what had been removed, therefore it must be your teeth." At this stage she asked to see me in consultation. A dentist pronounced the teeth well filled and sound. Her troubles had been going on for some years. One lobe and half the other were removed at one operation, with much greater relief than had followed all the previous treatment.

If rhinologists say the septic focus is in the naso-pharynx and accessory sinuses, and the "intestinal stasis" men say that the cause is in the alimentary canal, the patient will have to travel a long lane before she comes to the turning. Septic foci should always be removed before anything further is done. Tonsils, teeth, sinuses should be investigated, as well as abdominal condition, and thoroughly—but with wisdom, judgment, and restraint.

Re X ray treatment: The difficulty of preventing burns has, I believe, been overcome. It is not so easy to judge how much active gland tissue the rays will destroy. The effects, I understand, continue after the application of the rays. I do know of one case in which myxœdema followed X rays. And I do know of cases which have had to come to operation after X ray treatment has proved ineffective.

It is a question whether one can more accurately judge the amount to be left by operation, where one can leave an upper pole with its own blood-vessels quite intact and fully functional, or by X ray, with which one does not know the exact amount or extent of cell destruction.

I can vouch that it is a fact that whatever is left after operation does not atrophy, but rather tends to increase in size. Also, from carefully reading Hernaman-Johnson's paper, I think there is no doubt that the degree of improvement following operation is much greater than that following X ray treatment.

Questions of operative technique, anæsthesia, safety of operation, death-rate, division of cases into types, and the response of different types to removal of gland tissues, amount to be removed, and best time for operation, importance of parathyroids—all of these must await a later article, when I can obtain access to my own records.

MEMORIAL SERVICE IN LONDON FOR THE LATE DR. ELSIE INGLIS.—At the service held on Dec. 6th at St. Margaret's, Westminster, in memory of the late Dr. Elsie Inglis, the Bishop of Oxford analysed the qualities which had made her life so fruitful of results. Personal surrender and warm sympathy were combined in her with the gift of organisation and of wise government. Twice she had rescued the Serbian nation from despair by her splendid courage, and her name was revered by the Serbians almost as one of their legendary heroes. Representatives of the Allied Governments were present at the service, including Mr. Balfour, Lord Robert Cecil, and Sir Alfred Keogh. The Red Cross Societies and various Women's Societies were strongly represented.

NASAL RECONSTRUCTION.

WITH A NOTE ON NATURE'S PLASTIC SURGERY.

BY J. L. AYMARD, M.R.C.S., L.R.C.P. LOND.,

CAPTAIN, R.A.M.C.(T.); LATE PLASTIC SURGEON, CAMBRIDGE HOSPITAL, ALDERSHOT; EAR, THROAT, NOSE, AND PLASTIC SURGEON, THE QUEEN'S HOSPITAL FOR FACIAL INJURIES, SIDCUP, KENT.

TIME and other conditions being favourable, it would have given me the greatest pleasure to have published my failures of the past 12 months in their entirety. I would, however, point out that such failures, accompanied by any small success I have achieved, are duly noted and illustrated in the records of the Queen's Hospital.

My excuse for writing this article must be that opportunity has perhaps placed me in a favourable position with regard to ample material. Whilst flaps and methods for reproducing the complete nose have in the past been fully written up in most surgical text-books, the causes for failure are hardly ever dealt with, and details of the work are sadly deficient.

Let me start by reminding those who have not seen cases prior to operation that almost the *greatest difficulty* presenting itself is the fact that when the nose has been destroyed by war injury the scar tissue surrounding the lost organ has to be utilised for the junction of the new flap. The most common cause of failure is probably due to the fact that the nasal cavity is not an ideal aseptic one any time, but rendered much more unhealthy owing to the inevitable damage to one or more of the sinuses and their surrounding tissues. This cause of failure has been partially due, certainly in my own case, to undue haste, in not recognising the Golden Rule—that no plastic operation of any kind can possibly suffer through reasonable delay.

The Principle of Nasal Construction.

One is so apt to formulate principles only to discard them later that I feel somewhat diffident in attempting to do this. However, I think most rhinoplastic surgeons will agree with me that the following require attention:—

The *flap* should be taken, if possible, from the site likely to lead to the least ultimate disfigurement. The *lining of the flap* should take some form other than scar tissue. The *new organ* should, as much as possible, correspond with the original. The *supporting framework* should, as closely as possible, simulate the original. The *bed area for the new organ* should be most carefully prepared.

Having relieved myself of these ideals, I will show later how I produced a fairly respectable organ by unintentionally almost discarding them.

The Flap Taken from the Forehead.

The side from which this is taken depends entirely upon the largest area free from hair.

The second case described shows a new method I am trying. It consists in taking a long pedicle flap with its base near one clavicle, and forming the nose upon the chest, on the opposite side, keeping the head slightly bent upon the chest for 14 days.

I have adopted this method, not because I am entirely disappointed with the forehead scar, but because, if successful, the advantages in time, &c., would be considerable.

If this chest flap fails, I shall then resort to two flaps as used in the first case illustrated (Fig. 2), that is to say, a small forehead flap and alar flaps from the cheek. The above, of course, may have to be modified owing to the presence of extensive scar tissue.

The Question of Lining Nasal Flaps.

The necessity for some form of covering other than scar tissue presenting internal to the nasal cavity is generally admitted. I endeavoured to overcome this difficulty by removing the entire periosteum, and I think failure was only due to a mild septic infection. The argument as to the delay in healing over bare bone is, I think, counterbalanced by the fact that the slower the growth of the scar the better the result. Whether the whole of the skin flap should be epithelium or part epithelium and part covered with mucous membrane remains to be seen.

Resemblance to Former Organ.

I have had not only the advantage of a skilful sculptor—Mr. Edwards—but also the invaluable services of Professor Tonks upon these points. However ideal it may seem, and

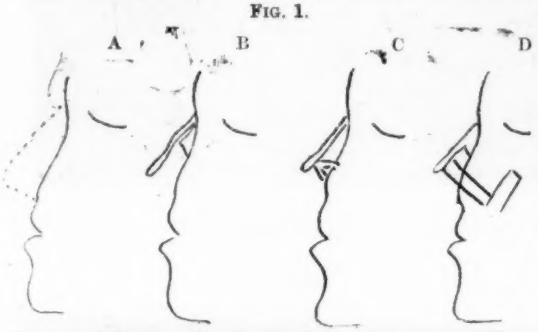
no matter how much one falls short of this ideal, I feel certain that it is advantageous, and its employment will assist us in the near future in producing fairly constant and satisfactory results. In the first case (Fig. 2) I made the most accurate calculation as to skin and cartilage from sections of the sculptor's model, and, but for the inevitable accident of partial sepsis, the result would probably have been a faithful copy.

The Supporting Framework.

Should these be cartilage, bone, or a combination? I am in favour of all cartilage framework. Cartilage will attach itself to bone exactly as bone will to bone, and the resistance of cartilage to mild sepsis is an argument in its favour, and, further, we know that cartilage remains a constant, whereas bone unattached is prone to disappear.

Possibly, in the near future, the exact supporting structures of the nose may be copied in their entirety, but for the present we must be content with other methods. In Fig. 1, A represents the artist's model; B, what I designate the "diving-board" principle of support—that is to say, the bank represented by one or more layers of cartilage, and the spring-board the overhanging cartilage. The bank portion of this principle is an essential to success, and whether built up by turning down a skin flap or by turning up the turbinate bones by Seccombe Hett's method is a matter of choice. The essential to success is, that in some form or

FIG. 1.



Diagrams of the supporting framework for the new nose. A, The sculptor's model. B, The diving-board principle. C, The road-stop principle. D, The diving-board and swung septum.

other, the prominence due to the lost nasal bones must be reproduced. Without support to the free end of the "diving-board"—viz., the cartilage—only indifferent success will be attained. Fig. 1 C represents the trestle principle with lateral supports. Where lateral supports are used, in order to be certain of any success, they have to be made of considerable strength. Personally I am now in favour of D, the septal support swung forward where possible or the alternative of a new septum as recommended in Holmes's "Surgery" 50 years ago. I have in mind an excellent rigid septum made by Lieutenant Seccombe Hett. He dissected up two flaps of mucous membrane, between which he inserted a mass of cartilage 2 in. by 1 in. by $\frac{1}{8}$ in. which I dissected from the eighth costal. If this can be done at the same period at which the other cartilage is inserted under the skin, then I think a great deal will have been attained.

The preparation of the skin area upon which the new nose is to be embedded. Great care must be given to this stage, and it is advisable to undercut the skin and tissues in order to contract the opening and bring healthy new tissues into the region for this purpose. Re-formation of the lip is frequently necessary.

Illustrative Cases.

CASE 1.—The photograph (Fig. 2 A) shows the case of a man with total loss of nose, right eye, and middle portion of his lip. In this case the cartilage shaped was introduced beneath the periosteum and the whole turned down and fixed in proper position at one operation. If the first photograph is referred to the amount of scar tissue to be dealt with can be readily seen. I formed the new lip at a separate operation, but a mass of scar tissue remained into which the new nose had to be implanted.

The second photograph (Fig. 2 B) shows the new left ala and tip which were made from a cheek flap. A portion of the right ala still remains to be formed, the wrinkles under the left eye can be removed, and the right lower eyelid raised. The hollow, sunken appearance of the right eye will be seen to have been overcome in the second photograph. This I brought about by the introduction of my cartilage sphere.[1] The man has considerable movement with the glass eye. Many other records and details of this case can be seen at the Queen's Hospital. There is no nasal stenosis.

CASE 2.—This illustrates a method of building the new nose upon the shoulder and transferring the same temporarily attached by a long pedicle. If this method succeeds it has the following advantages: absence of forehead or face scars and time.

Oct. 15th, 1917: I introduced the cartilage under the skin—one piece about 2½ inches long to form the main support and two lateral pieces at right angles and underneath the same. These are shown in the diagram Fig. 4 (1 and 2). The diagram, Fig. 4 (3), also shows the shape of these cartilage pieces. On Nov. 12th I performed the second stage of the operation in conjunction with Lieutenant Seccombe Hett. This consisted in separating and undercutting the pedicle from A to B and sewing it together tube fashion, Fig 4 (2). Between B and C below the skin was incised and undercut to the upper B and C, and an epithelial graft was introduced upon rubber. The raw surface between AA and BB was undercut and drawn nearer together, leaving an inch of raw surface.

The objects of this portion of the operation were: firstly, to provide the necessary lining for the nose, secondly to render the pedicle as free from granulation and suppuration as possible by folding it together, and, further, by partial detachment to favour the blood-supply in the right direction. The transfer to the correct position will, if all goes well, take place in about three weeks.

The further notes on this case denoting either success or failure will be supplied by Major Gillies and Lieutenant Hett, in whose able hands I must now leave the case.

Photograph 1 (Fig. 3 A) shows the condition of the wound prior to operation. The condition of the upper lip will be noted and the position of a remnant of the right ala. Above the ala was a mass of displaced nasal bone which I removed.

Photograph 2 (Fig. 3 B) shows the ala now in the middle line. The new thick upper lip was formed by swinging a mass of tissue over towards the left side. This photograph also shows a prominent turbinate bone which had been advanced by Lieutenant Hett. The reduced area of skin opening will be noted, as also the established air passages.

Some Points in Treatment.

There are certain general matters and points of treatment to which I will now refer.

Preliminary treatment of patients.—In the first place, it is essential to get the patient as fit in general health as possible, and no time is lost by paying the most minute attention to the condition of the surrounding parts. The next all-important question is the establishment of the nasal passages, which must be thoroughly carried out.

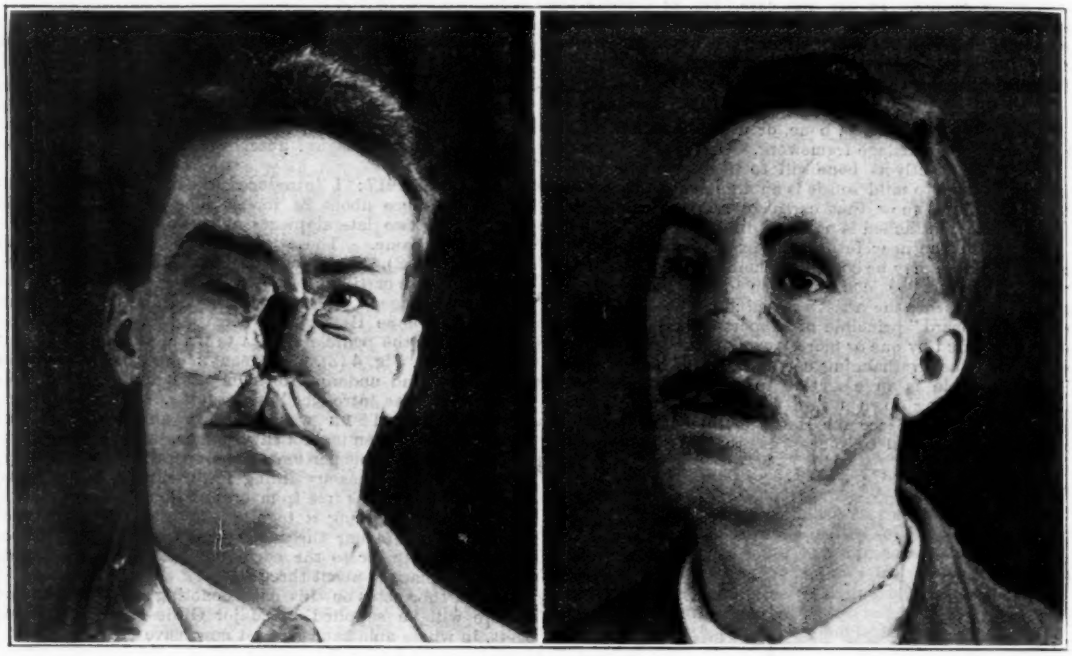
Common sources of trouble are suppurating lacrymal sacs, antrums, sequestra, portions of nasal bones embedded in the cheeks, and the condition of the patient's teeth. This possibly entails several preliminary operations.

Removal of cartilage.—Either the operating surgeon should first remove the costal cartilage (eighth) left or right, and close up the wound before proceeding to the head work, or an independent surgeon should do this part. But to avoid infection there must be no going back for further cartilage without a complete clean-up and change of everything, including instruments. The theatre sister must be also carefully watched. By failure to carry out the above régime very strictly I alone am able to account for one or two septic chest wounds. It is our principle to secure very carefully the chest wound with four or five deep silkworm mattress sutures and a long blanket horsehair upon the edge. There is, however, one caution to be added. Watch very carefully the chest wound. If undue tenderness or rise of temperature occurs, at once take the precaution to remove a suture. This may at once localise the trouble.

Dressings.—Like most surgeons, I look upon dressings as of little value other than for protection. The patient may put his hand up if not most carefully watched, and in this country, where the importance of the value of properly fly-proof wards is not fully recognised, infection may readily

[1] THE LANCET, 1917, ii., 644.

FIG. 2 A. FIG. 2 B.



Case 1.—Total loss of nose, right eye, and middle portion of lip. Reconstruction of the nose by means of (1) a small forehead flap, and (2) alar flaps rom the cheeks. Formation of a new lip. Introduction of cartilage sphere into eye socket.

FIG. 3 A. FIG. 3 B.

Case 2.—Loss of most of the nose with displacement of the right ala, and disfigurement of upper lip. The new thick upper lip has been formed by swinging a mass of tissue over to the left side. The turbinate bone has been advanced. The nose will be reconstructed by a shoulder flap with long pedicle (Cf. Fig. 4).

follow from this cause. For this reason only I use ambrine wax with an addition of 50 per cent. paraffin, and sometimes also a light gauze dressing.

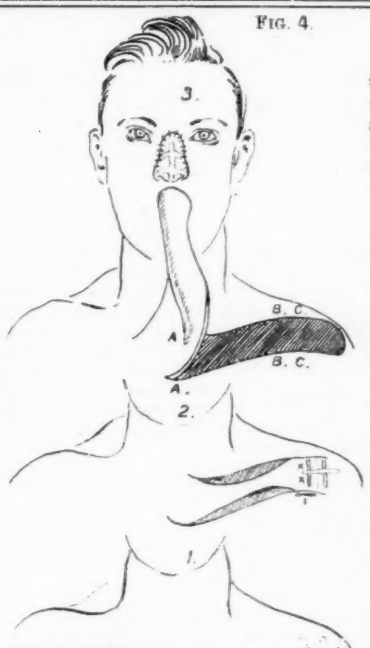
Sutures.—This question I have fully dealt with recently in THE LANCET (1917, ii., 347), and to this article I must refer my readers.

Subsequent treatment.—Irrespective of the few minor operations which may be necessary to complete the case, the question of mechanical treatment arises. Can the nose be straightened or the skin condition improved by any method of pressure? I have given this question considerable attention, and the conclusion I have arrived at is that mechanical pressure is useless. A puffy condition of the skin may be so compressed that for an hour or so after the removal of the appliance a satisfactory appearance is maintained, but subsequently the former condition supervenes. Massage I look upon as of the greatest value.

Lastly, let me say that I consider a complete loss of nose one in which the soft parts and bony structures up to the frontal process are absent. Every other so-called total loss of nose must be discounted. As the result is proportionate to that which is left—for instance, where the nasal bones are merely driven in and depressed—the problem is much simplified. Where one or both alæ are present also an advantage may be gained by their use.

In conclusion, I must apologise for bringing two cases forward which are incomplete, but my return to South Africa compels me either to do so or delay for a considerable period any publication. Current work, however, at the present time, whether successful or otherwise, seems to me so important that hardly any excuse would appear to be necessary.

FIG. 4.



Method of building up a new nose upon the shoulder. 1. The strips of cartilage introduced under the skin. 2. Separating and undercutting the pedicle, and sewing it together tube-wise. 3. The flap in position.

Nature's Plastic Surgery.

There can be no wish on the part of the profession in general or the plastic surgeon in particular, either intentionally or unintentionally, to magnify or minimise the value of work done. The plastic surgeon is no further responsible for the above results than that he has exercised his up-to-date knowledge of the treatment of jaw wounds.

The man who in this stage deserves all the credit which may be bestowed upon him is the dental surgeon, who by his ingenuity and skill holds the fragments of the jaws together in good articulation. The point of interest to all surgeons when examining critically the work of the plastic surgeon is to discard the first photograph, but to examine carefully the one depicting the result of Nature's efforts prior to operation. Fig. 5 shows such a result of Nature's plastic surgery. No treatment was applied between the periods at which the two photographs were taken, with the exception of a dressing with No. 7 paraffin—the War Office substitute for ambrine—as suggested by Major Gillies.

To give a photograph of the original condition of the patient and to miss out this photograph is, from my point of view, more than misleading. To the experienced plastic surgeon some of the largest facial wounds which appear sensational before and behind the camera present few difficulties by the time Nature has completed her part. The plastic surgeon only wishes for credit for his subsequent work.

FIG. 5 A. FIG. 5 B.

Illustrating Nature's plastic surgery. No treatment was applied between the periods at which the photographs were taken with the exception of dressings with No. 7 paraffin (War Office substitute for ambrine).

THE USE OF THE TURBINALS AND THE SEPTUM IN THE REPAIR OF INJURIES AND DEFECTS OF THE WALL OF THE NASAL CAVITY.

BY G. SECCOMBE HETT, M.B. LOND., F.R.C.S. ENG.,
LIEUTENANT, R.A.M.C.; SURGEON TO QUEEN'S HOSPITAL FOR FACIAL INJURIES, SIDCUP, ETC.

THE middle and inferior turbinals and also the septum nasi have proved very useful in the author's experience for the repair of damage to the nose due to war injuries. The inferior turbinals have also been found to be excellent for the repair of wounds in the floor of the nose causing perforations through the palate.

In the experience of every rhinologist adhesions between the septum and the turbinals are very ready to form if there is an abrasion of contiguous surfaces in the nasal cavity. Even without actual contact, blood clot seems able to become organised and promote an adhesion between adjacent abraded mucous membranes. Such adhesions form only too readily after intranasal operations, and it is difficult to prevent them re-forming when once established. Furthermore, the vitality of the turbinals is great owing to their vascularity, and they are able to persist and to form new attachments, even when surrounded with muco-pus.

Perforations of the Floor of the Nose.

Early in 1916, in a case of gunshot wound of the nose with perforation of the anterior portion of the hard palate, I detached the anterior end of the left inferior turbinal and pushed it down into the cavity, which it filled and formed a sound watertight plug. This was done at the late Lord Lucas's Hospital for Soldiers at Wrest Park. During the same year Major Gillies independently made use of the turbinals for the repair of the walls of the nose.

Technique.—The attachment of the inferior turbinal is cut through for the requisite distance and, the margin of the perforation having been freshened, the turbinal is pushed backwards and into the perforation. A circular cut is made in the mucous membrane of the turbinal where it protrudes into the palate, and it is then stitched in position by several horsehair sutures, the raw areas of turbinal and palate being co-apted.

When firmly attached to the palate the turbinal can be severed entirely from its connexion in the nose. This latter procedure may be necessary from two points of view, one being to prevent the possibility of nasal obstruction, the other being that if, although adherent to the palate, the perforation is not entirely obliterated, the intranasal portion of the turbinal can be pushed further into the perforation, so as completely to fill the latter.

In cases where the perforation was at the junction of hard and soft palate, I have first detached the posterior end of the turbinal and fixed this to the posterior margin of the perforation, and subsequently when the blood-supply of this attachment was established I then detached the anterior portion and pushed the turbinal bodily backwards and downwards into the perforation so as to close it. (See Diagram A.) Lastly, a free turbinal graft may be taken and used to fill up the gap, but I do not think this method is as safe as the former.

FIG. 1A.

Case 1.—Before operation.

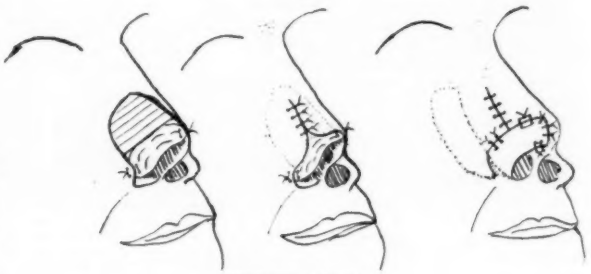
FIG. 1B.

Case 1.—After operation.

Destruction of the Ala.

In one case (Case 1), where the right ala nasi had been destroyed, I employed the free turbinal graft to form a support for the new ala. In this case the anterior portion of the inferior turbinal had been destroyed as well as the ala. I therefore removed the anterior half of the left inferior turbinal and attached it anteriorly to the septum and posteriorly to the junction of the nasal floor and outer wall of the nose. It formed attachments and lived. A fortnight afterwards I turned a skin flap from the cheek and covered it over, having previously removed the mucous membrane from its other side. This combination formed a good ala, although a somewhat rigid one. (See Case 1 and diagrams.)

FIG. 1C.



Diagrams of Case 1.

Wounds of the Bridge.

In cases of loss of the upper part of the bridge of the nose the middle turbinals are useful in filling up the hole and also in combination with the septum they can be made to form a support for the skin flap which is subsequently brought down to cover over the gap. They also have the advantage that the mucous membrane of their deep side can be left and thus form a mucous membrane lining as well as a support for the overlying skin flap.

Technique.—The middle turbinal is detached posteriorly by cutting through its line of attachment with a saw or a spokeshave. The cut stops within ¼ inch of the anterior end. The turbinal is then swung round so that its posterior end protrudes through the opening in the nose. The turbinal is now laid transversely across the gap, resting on the remains of the septum if present, or joined to the middle turbinal of the opposite side which has been treated similarly. In this latter case the posterior end of both turbinals are rawed and sewn together, so as to form a pent-house.

If the gap is more extensive the inferior turbinals may be similarly treated so as to form a double pent-house, all four turbinals being attached together after their adjacent surfaces have been rawed. This double pent-house forms a solid mucous-lined support for the subsequent plastic operation, and if, as is often the case, further prominence is required, it is no bar to the use of a rib-cartilage graft in the skin flap, which is subsequently brought down. (Diagram B.) In cases where a portion of the septum has been destroyed in the above injuries, a turbinal may be superimposed upon it, so as to restore the partition. (See Case 2.)

Total Loss of Nose.

As mentioned in the section on palatal perforations, a turbinal may be first semi-detached and its posterior made to form a new attachment, and subsequently its anterior end may be cut free and advanced to a new position. This was found useful in a case of destruction of the whole nose with great loss of tissue on the left side due to destruction of the nasal process of the left superior maxilla.

In this case the middle turbinals were twisted forward as previously described. The remains of the septum were partly detached by a cut passing horizontally backwards along the floor of the nose, which then curved upward towards the roof. A pear-shaped piece of septum was thus obtained attached by a pedicle above. It was turned sideways and stitched to the left middle turbinal which was twisted downwards. The lower end of the left middle turbinal was attached to a piece of turbinal below, which had previously been brought over from the right side. The posterior end of the right middle turbinal was attached to the right (originally anterior) margin of the septum. Subsequently the anterior end of the right middle turbinal was detached and brought down to the floor of the nose to the left of the middle line.

FIG. 2A.

Case 2.—After operation; first stage.

This mass of turbinals and septum forms a very solid support and covering for the cavity and has helped materially to fill up the large area of the wound (4 inches across at its widest part). The patient is now able to blow his nose for the first time since receiving his wound. (See Case 3 and diagrams B and C.) In this case the septum was turned laterally to cover over the greatest possible space. In other cases the septum flap has been cut to give support and prominence to the bridge or to support the columella by the incisions. (See diagrams C 1 and C 2.)

FIG. 2B.

Case 2.—Before operation.

In one case where the septum had been mainly destroyed, the maxillary crest together with the remains of the septum was swung forwards and upwards from its base and attached to the anterior end of the right inferior turbinal—the latter was detached posteriorly and its posterior end swung up and attached to the under side of the remains of the nasal bone. Thus a continuous support, consisting of maxillary crest, cartilage, and some of the turbinal covered with mucous membrane, was obtained which was firm enough to hold up the bridge of the nose. (See Case 4 and diagrams.)

FIG. 3A.

Case 3.—Before operation.

DIAGRAM A.

To illustrate the use of the anterior and posterior ends of the inferior turbinal to fill up traumatic perforations of the floor of the nose.

DIAGRAM B.

To illustrate the method of advancement of the middle and inferior turbinals.

Loss of Nasal Supports.

In a case of perforating wound of the nose in which the external wound had closed, there was depression of the bridge with undue prominence of the tip together with nasal obstruction. I did a submucous resection, removing most of the bowsprit so as to depress the tip. The removed piece of cartilage was divided into three equal quadrilateral pieces. The skin over the upper part of the bridge was separated by a tenotomy knife and the three pieces of cartilage were inserted superimposed to do away with the depression. (See Case 5.)

In a similar case (L. B., Brook-street), after closing a hole in the upper part of the bridge by one frontal and two lateral flaps, the patient was still left with the same deformity as in the preceding case. In this case I subsequently did a submucous resection and by means of a tenotomy knife introduced between the flaps, was able to free a passage up to the skin of the bridge. The septum was then replaced and pushed up under the skin of the bridge. This was possible owing to destruction of the nasal bones. It improved the profile considerably. (See Case 5.)

FIG. 2C.

Case 2.—Before operation.

I do not intend to suggest that this use of the septal cartilage will replace the use of costal cartilage as a means of rebuilding the bridge of the nose in cases of rhinoplasty. Where a nose-flap from the forehead or chest is required for the formation of the whole or of the greater part of the nose it is obviously not applicable, as in such cases a rib cartilage graft in the flap is necessary. Again, in many cases of partial loss of the nose where the above measure is unnecessary, there is often not sufficient septal cartilage available and a subcutaneous rib graft on the diving-board principle frequently gives the best results.

Heterogeneous Septal Cartilage Grafts.

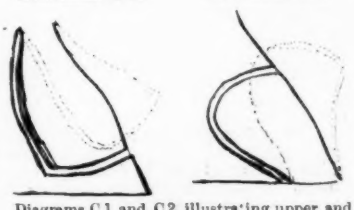
In certain cases the alæ and tip of the nose sink in owing to destruction of the septal cartilage, while the nasal bones and lateral support of the nose remain. This may be seen in cases of forcible blows on the nose with subsequent suppurating hæmatomata of the septum. Where the soft tissues of the septum remain intact it is possible to introduce a septal cartilage removed from a case of submucous resection and to insert it into the place of the one destroyed, and so reproduce the proper contour of the tip.

FIG. 3B.

Case 3.—After operation; first stage.

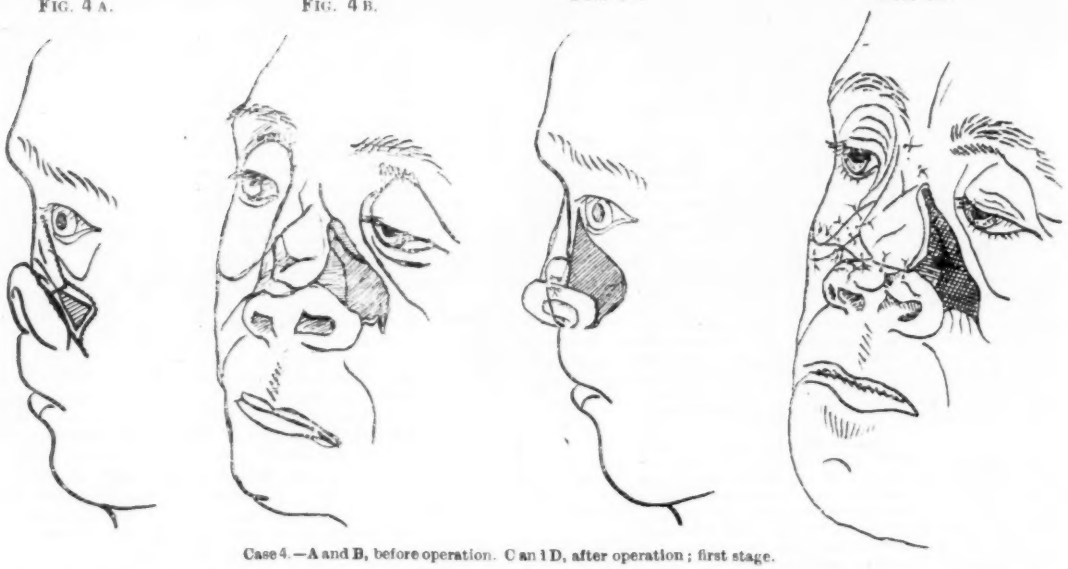
An incision is made through the columella and carried between the two sides of the remaining fibrous septum. The thumb and finger placed in the vestibule guide the knife, and the incision is carried back to the bony septum and up to the central ridge of the nose, just underneath the skin. Great care has to be taken, as, of course, a perforation will spell failure, and there is no chance of separating the sides of the septum except by a knife. The free heterogeneous cartilage is then inserted, the incision in the columella sutured, and the case treated as one of submucous resection.

DIAGRAM C 1. DIAGRAM C 2.



Diagrams C 1 and C 2, illustrating upper and lower septal swings.

FIG. 4 A. FIG. 4 B. FIG. 4 C. FIG. 4 D.



Case 4.—A and B, before operation. C and D, after operation; first stage.

My experience of heterogeneous septal cartilage grafts is not yet sufficient to make a statement of their success. Instead of using a heterogeneous graft to reproduce a septum which has been destroyed, a new septum may be formed from the patient's costal cartilage and introduced in the manner described above. I used this with good cosmetic result in Case 7 (see notes of case).

The Use of the Septal Swing.

Besides the use of the septal cartilage in bringing up the prominence of the bridge, by taking it out by submucous resection and placing it under the skin of the nose, as was done in Cases 5 and 6, there are two other methods by which it may be made useful. This is by the method of septal swing, either upwards, downwards, or laterally. Diagrams C 1 and C 2 illustrate this.

FIG. 5 A.

Case 5.—Before operation.

In the case of the upward swing the septum is cut backwards along the floor at the junction of the maxillary crest. The cut is then continued upwards towards the roof of the nose and the septal flap, including cartilage and mucous membrane, is swung forwards. Remaining attached by a pedicle above, it is retained in position by advancing the two middle turbinals, so that a pent-house supports the partition. This is useful for producing a prominence due to loss of tissue of the upper part of the bridge. (See Case 3.)

The reverse of this is done for the lower septal swing. The cut is made backwards, downwards, and forwards, and the septal flap tilted forwards, remaining attached to the floor of the nose. This is useful in cases of the pug-nose type, where the alæ sink in, so that the external nares approximate more to the vertical than to the horizontal position. (See Cases 4 and 7.)

Lastly, in loss of one side of the nose the septum may be swung outwards by means of a horizontal cut along the floor of the nose and two parallel cuts carried at right angles to this up to the bridge. (See Case 1, Fig. 1 C.)

Conclusions.

As a result of my attempt at building up the nose from the inside I have come to the following conclusions:—

1. The turbinals and the septum are capable of being advanced into new positions to form fresh attachments and continue to live.

2. The advancement of the turbinals is a useful procedure in the cases of loss of the whole or part of the nose.

3. The upper septal swing is useful as an aid for supporting the new bridge of the nose.

FIG. 5 B.

Case 5.—After operation.

4. The lower septal swing is often required in the pug-nose type. In these cases the septum may be sometimes swung forwards and downwards with the tip of the nose and alæ attached, and help to retain the latter in their new position. The lateral septal swing may be used to form a support for the side of the nose.

5. The septal cartilage after removal by submucous resection may be used as a free autogenous graft for increasing the prominence of the sunken bridge or for a nasal support. Heterogeneous septal cartilage graft may be used in the same way as an autogenous cartilage graft to restore the contour of a sunken nose, to elevate a tip, or raise a bridge by using it to form a new septum nasi.

Illustrative Cases.

CASE 1.—Corporal H——, patient at the Hospital for Facial Injuries, Brook-street. The lower half of the right side of the nose had been destroyed, including the right ala, by gunshot wound. (Fig. 1 A.) The mucous membrane of the right half of the cartilaginous septum was separated. It was incised by three cuts, leaving it attached below as in the

FIG. 6A.

Case 6.—Before operation.

FIG. 6B.

Case 6.—Before operation.

FIG. 7A.

Case 7.—Before operation.

diagram. The cartilage with its left half of mucous membrane was then cut through, leaving it attached above. The cartilage was then swung over and attached to the edges of the wound which had been previously freshened. The right inferior turbinal had been partially destroyed. The anterior half of the left inferior turbinal was removed and placed across the gap below the septum in the position of the ala. It was attached to the tip of the nose and to the junction of floor and outer wall of the nose. The cartilage was covered by undercutting and advancing skin over it. A fortnight later a cheek flap was turned down and attached over the turbinal from which the mucous membrane of the outer side had been removed. The side of the nose had therefore both a mucous lining and a support. The case did well, and the patient can breathe well through the nose. (Fig. 1 B.)

CASE 2.—Private H——, at the Queen's Hospital, Frognal, Sidcup. Gunshot wound of left, and bridge of nose. (Fig. 2A and B.) The left eye had been removed, the upper half of the nose had been destroyed, and there was nasal obstruction.

First operation.—Removal of adhesions between both middle turbinals and septum. Removal of sequestrum from the neighbourhood of the opening of the right frontal sinus.

Second operation.—The right middle turbinal was detached posteriorly, its anterior attachment being left. The turbinal was swung forwards and downwards, and superimposed upon the septum to which it was attached. It grew in this position, thus forming a support for the skin flap, which will shortly be brought down to cover the gap.

CASE 3.—Lieutenant S——, the Queen's Hospital, Frognal. In this case the whole nose was destroyed by gunshot wound. In addition the wound extended to the left with destruction of the nasal process of the superior maxilla. Major Gillies had previously placed a costal cartilage graft on the forehead and a portion of the left inferior turbinal had been advanced. (Fig. 3A.) There was a very wide gap in the face and it was thought advisable to try to cover this up to some extent by turbinal and septal advancement.

The right and left middle turbinals were swung downwards and forwards. The upper septal swing was used, but instead of supporting the swung-forward septum in the usual pent-house manner, the septum was turned sidewards, so as to cover over as much space laterally as possible, and the turbinals attached as shown in the diagram. The mass of tissue has lived and hypertrophied and now forms a hypertrophied and rasuberry-like mass very nearly filling up the cavity. (Fig. 3B.) This patient will soon be ready for bringing down the new nose. He can now for the first time since the injury blow his nose.

CASE 4.—Private C——. Wounded May 2nd, 1917. Admitted (from a General Hospital, France) Sept. 23rd. Condition (Oct. 3rd): The bridge of nose was flattened and sunken in, due to loss of nasal bones and the majority of the nasal septum. The flattening was more marked on the left side owing to the destruction of the nasal process of the maxilla. There was an opening into the nose in this position. The soft tissues of the bridge of the nose were reduced to a mass of scar tissue. The alæ had sunken in so that their lumen was vertical.

Operation.—Oct. 5rd; Lieutenant Hett. A transverse incision was made just above the alæ, and these were turned down into their normal position. A piece of maxillary crest and remains of septum was turned upwards and forwards from the floor of the nose. This was attached to the anterior end of the right inferior turbinal. The inferior turbinal was then turned upwards and its posterior end attached to tissues at the base of the nose. This was so arranged that the turbinal and septum graft formed a continuous bony and cartilage rod covered with mucous membrane, which was found to form a sufficiently firm support for the bridge. A cheek flap was cut which, together with a flap of healthy skin from the base of the nose, was of sufficient size to be joined to the right ala and form the right half of the nose. The left half of the nose was left widely open for drainage, as the left maxillary antrum was found to be unhealthy. It is intended to turn in the scar tissue of the left cheek and to cover it with a forehead flap containing cartilage if necessary.

FIG. 6C.

Case 6.—After operation.

FIG. 6D

Case 6.—After operation.

FIG. 7B.

Case 7.—After operation.

FIG. 8 A.

Case 8.

FIG. 8 B.

Fig. 8 B (Case 8).—Before operation; first stage.

FIG. 8 C.

Fig. 8 C (Case 8).—After operation; first stage.

CASE 8.—Private R. C——, aged 19. Admitted Sept. 3rd, 1917. Destruction of the greater part of bony superstructure of nose, including greater part of the nasal bones and the nasal process of the superior maxilla. The alæ of the nose were present. There was a hole about the size of a threepenny-piece above the ala. The alæ had the usual vertical displacement (pug-nose type).

Operation.—Oct. 12th; Lieutenant Hett. First stage of restoration of bridge. Transverse cut above the alæ. The alæ brought down into horizontal position. The margins of the perforation cut away and the soft tissues of the nose turned over to the left. The remainder of the septum was swung forward and stitched to the underlying soft parts, so that the prominence of the bridge was to some extent restored. A large opening was left in right half of the nose. (Fig. 8 A, 8 B, 8 C.)

CASE 9.—Rifleman T. H——, aged 32. Wounded May 27th, 1917. Admitted July 11th. Transferred to Queen's Hospital August 21st. Shrapnel wound left side of face. Left half of nose absent. Antrum open on face. Opening from floor of antrum through gingivo-labial fold. (Fig. 9 A.)

Operation.—Sept. 27th; Lieutenant Hett. Opening between the antral cavity and the mouth was closed by raising the antral mucous membrane round the opening and closing the edges by silkworm-gut sutures. The upper lip was everted, and the mucous membrane of the alveolus and inner surface of upper lip was also sutured together by horsehair sutures. The left middle turbinal was detached posteriorly, twisted forwards, and its posterior end attached to the anterior portion of the floor of the nose so as to form a support for a subsequent plastic operation on the nose. The right ala nasi was adherent to the septum by adhesions. The ala was partly detached below and the adhesions removed and a tube inserted into the right nasal cavity, thus establishing the patency of the right nasal passage.

CASE 5.—This patient had sustained a gunshot wound which penetrated the base of the nose and necessitated the removal of the right eye. The external wound of the nose had healed so that there was no perforation at the time of examination. There was considerable sinking in of the upper part of the bridge. This caused an appearance of undue prominence of the lip and produces the typical bird-beak deformity. (Fig. 5 A.)

Submucous resection of the septum was done and several intranasal adhesions cleared. The purpose of the operation was twofold: (1) to remove the nasal obstruction; (2) to obtain a septal cartilage graft. After its removal the septal cartilage was divided into three equal quadrilateral parts. These were inserted superimposed under the skin of the upper part of the bridge, through an opening made by a tenotomy knife. The submucous resection was carried as nearly as possible to the tip of the nose so as to try to depress the latter. (Fig. 5 B.)

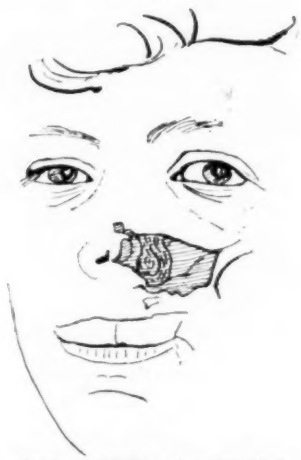
CASE 6.—Private S——, a patient at the Hospital for Facial Injuries, Brook-street, was admitted with a gunshot wound through the upper part of the bridge of his nose. There was an opening into the nasal cavity in this situation. (Figs. 6 A and B. When the wound was clean a flap of scar tissue was turned across the opening so as to cover it up. A skin flap was turned up from the root of the nose and by undercutting and prolonging incisions in the line of the eyebrows a sufficient length of skin was obtained to cover over the gap and be sutured to the lower margin of the wound which had been previously freshened. Two lateral flaps were cut and were stitched to the margins of the median flap.

A fortnight later a submucous resection of the septum was performed and the cartilage removed. Some adhesions in the upper part of the nose were cleared away. A tenotomy knife was introduced between the submucous resection flaps and carried up to the bridge of the nose just underneath the skin. The septal cartilage was then reintroduced, but with its long horizontal axis vertical. This was done in order to give greater prominence to the bridge and to prevent flattening of the nose.

FIG. 9 A.

Case 9.—Before operation.

FIG. 9 B.



Case 9.—After operation; first stage.

CASE 7.—Private C——. This patient received damage to the face while serving in France by a kick from a horse. As a result of this the septal support for the nose sloughed out and a segment of the lateral support. The nasal bones remained. As a result of the injury the nose drooped and fell in from the middle of the bridge to the tip, causing a marked prize-fighter type of face. (Fig. 7 A). It was found on examination that the whole of the septal cartilage and part of the vomer were missing and the soft parts of the septum had healed and were intact.

Operation.—An incision was made down the mid-line of the columella from the tip of the nose down to the junction of the columella with the upper lip. This was deepened by a short tenotomy knife and the soft tissues of the septum were separated backwards until the remains of the vomer were met with. The division was continued upwards and forwards just under the skin of the bridge and tip. The two sides were separated also down to the floor of the nose in the same manner. By proceeding carefully with blunt and sharp-ended tenotomes aided by inspection of the inside of the nose, it was found possible to complete the separation without making a perforation into the nasal cavity.

Meanwhile Captain Aymard had exposed the eighth costal cartilage on the right side. He removed a quadrilateral piece of cartilage rather large than the normal cartilage of the septum and about the same thickness. It then cut this into shape so that it fitted tightly between the septal flaps. The usual submucous resection plugs were then inserted and kept for 24 hours. Fig. 7 B shows the condition after operation.

Addendum on the Use of Cartilage Grafts.

Since writing the above I have experimented further as regards the making of a new septum nasi from an autogenous costal cartilage graft. This has given very good results in reproducing the contour of a sunken nose. It is only applicable where soft tissues and mucous membrane of the septum remain. The technique employed is the same as that quoted in Case 7. I have also employed this method in a modified way to support a columella and to make a new nasal spine where the latter was required to restore the contour at the junction of the upper lip and nose. The reproduction of the septal support in making a new nose is, in my opinion, of great importance in order to produce a natural appearance and to prevent subsequent falling in of the organ. In cases where both the soft parts and cartilage of the septum are destroyed the following method is under trial:—

The mucous membrane of the floor of the nose is raised with an elevator and two flat pieces of cartilage are inserted under it. After an interval they are raised with their covering of mucous membrane, but their anterior attendants are left, they are then rotated forwards, their raw surfaces are accepted, and their free ends are attached to the under surface of the new nose, which has been brought down from the forehead.

This method is designed to produce prominence and prevent subsequent falling in of the nose.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION OF OBSTETRICS AND GYNÆCOLOGY.

Scopolamine-Morphine Narcosis in Child-birth (Twilight Sleep).

A MEETING of this section was held on Dec. 6th, Captain G. F. BLACKER, the President, being in the chair.

The discussion was opened by the reading of the papers forming the report of the committee appointed to investigate the effects of scopolamine-morphine narcosis. The observations were carried out independently. A standard solution of scopolamine was employed, the initial dose being morphia gr. ¼, scopolamine gr. 1/150. Subsequent doses consisted of scopolamine gr. 1/450 The patient was isolated during labour, and, as far as possible, precautions were taken to avoid sensory impulses. The cases were selected by the officer in charge of the ward, and the patients were preferably primiparæ in whom no complications were anticipated. Two charts were drawn up for use in the labour-room and at each injection observations were recorded, the results of which appear in the papers. Dr. EARDLEY HOLLAND was unable to take part in the report owing to absence on active service.

Reports of the Special Committee.

Captain HERBERT WILLIAMSON read a report on 20 cases under his care at St. Bartholomew's Hospital.

Dosage.—The initial dose of morphia hydrochloride gr. 1/4 and scopolamine hydrobromide gr. 1/150 was given when the cervix was dilated sufficiently to admit a finger, and, as a rule, when the pains were recurring regularly at intervals of not less than a quarter of an hour. One hour after the administration of initial dose, scopolamine gr. 1/450 was given, and 20 minutes later an object with which the patient was not familiar was shown to her. From this point onwards the memory test alone was employed. He thought the memory test a safe guide but not absolutely a reliable one, for there were instances in which apperception was present throughout, but amnesia was complete. It was the best guide to dosage that we possessed but demanded considerable experience and powers of close observation in the administrator. Its value was diminished by the necessity of arousing the patient each time it was applied. Two alternative tests had been suggested—Babinski's reflex and the pupillary pain reflex. These were tried in all cases but were found of little value.

Effect upon the mother: Uterine contractions.—If the pains of the first stage were good before the administration was commenced, little effect was produced; if they were weak injections of the drugs sometimes led to their entire cessation. Their experience confirmed that of Gauss, that in uterine inertia scopolamine-morphine narcosis should be avoided, for under its influence the pains become weaker and sometimes cease entirely. In the absence of uterine inertia it was found that little effect was produced upon the strength, frequency, or duration of the contractions in the first stage. The second stage was markedly prolonged, especially amongst the primiparæ, due to the lack of voluntary expulsive efforts on the part of the patient, and in three of the cases to weakening of the uterine contractions. The third stage was prolonged but there was no severe post-partum hæmorrhage. In three cases there was a temporary relaxation of the uterus four or five hours after delivery. A high percentage (45 per cent.) of the patients were delivered artificially. This was partly accounted for by the high proportion of abnormal labours, but Captain Williamson was of opinion that some of the patients in whom forceps were applied would have delivered themselves spontaneously had down-bearing-down efforts been present, and therefore that scopolamine-morphine narcosis increased the number of instrumental deliveries.

General effects.—There was no tendency to increase of the maternal pulse rate, and in only 1 case were the respirations affected. Thirst was complained of by almost every patient. Nausea and vomiting were present in 4 cases. Distension of the bladder with inability to pass urine necessitating the use of the catheter, was present in 6 cases. Flushing of the face and dryness of the skin were marked, but never caused much distress. Restlessness was common during the stage of induction. *Analgesia* was marked in 12 of the patients, slight in 5, and absent in 3. No definite relation could be traced between analgesia and amnesia.

Complete amnesia was attained in 11 cases	...	...	...	=	55 per cent.
Incomplete ,, ,, ,,	4	,,	...	=	20 ,,
,, ,, absent	5	,,	...	=	25 ,,

In these the whole course of labour was remembered.

Effects upon the child: Fœtal heart.—In 16 cases the fœtal heart rate was not affected; in four there was increased frequency which might have been due to the labour itself.

Condition at birth.—Nineteen of the children were born alive. One child was stillborn, but this was not to be attributed to the scopolamine-morphine narcosis. Of the 19 born alive, 8 were born in a condition of oligopnœa undoubtedly due to the combined action of scopolamine and morphine. Most twilight sleep babies were born in this condition, and although it appeared alarming, it was transient and need not cause anxiety. No treatment was required beyond covering up the child and keeping it warm.

History of the children after birth.—Of the 19 children born alive, all left the hospital well. In the majority there was no evidence that the scopolamine had produced any effect upon the child. There was no evidence that it was excreted in the milk, several cases having been examined.

The puerperium and period of recovery were not affected adversely by the injections. After long and trying labours the twilight sleep patients made a quicker recovery than those who had been delivered without it. Lactation was not affected unfavourably.

Captain J. S. FAIRBAIRN read a paper giving his observations on 80 cases at St. Thomas's Hospital.

The usual *dosage* was used except in a few of the later cases, when a slight modification was made, the second injection being 1/300 gr. hyoscine instead of 1/450. Cases of normal labour were preferred. Administration was begun when pains were regular at about five-minute intervals and the os about two fingers, but it was difficult to be sure of the precise moment. Of the 80 cases 60 were primiparæ and 20 multiparæ. The number of injections varied from 1 to 19, the average being 6·5. In the primiparæ the average was 7·2, and in the multiparæ 5·5. The memory test proved quite useless. The behaviour of the patient between and during the pains and the notice she took of the prick of the needle were found to be more useful, and had the great advantage of involving no additional disturbance to the patient. Their method was to begin with hourly hyoscine injections, and when the drowsiness and absence of response to the pains injections, or other manipulations indicated that the woman was fairly narcotised to omit one or more of the hourly injections. *Amnesia* was classified as "complete" when the patient remembered nothing from the time of the first injection; as "partial" when she had no clear recollection of her labour, but retained some impression of the final expulsive pains; and "absent" when she was able to recollect the events and progress of her labour.

Complete amnesia was obtained in 36 cases	...	...	...	=	45 per cent.
Partial ,, ,, ,,	26	,,	...	=	32 ,,
Amnesia was absent in	18	,,	...	=	22·5 ,,

Analgesia was considered as complete in all those cases in which complete amnesia was obtained, partial in those cases when the patient appeared to obtain relief from the injections and was satisfied that she had had an easy labour, and absent in those cases in which she did not seem to have had any relief.

Complete analgesia was obtained in 36 cases	...	...	...	=	45 per cent.
Partial ,, ,, ,,	40	,,	...	=	50 ,,
No ,, ,, ,,	4	,,	...	=	5 ,,

General effects.—No decided influence on the maternal pulse or respiration rate was observed. In 8 cases there was slowing of the pulse-rate sufficient to be noteworthy; in only one case was quickening recorded. Sleep between the pains was present in all but 3 cases, and in 27 there were periods in the labour when the pains did not rouse the patient. Mental confusion to some degree was present in most patients in whom narcosis was well marked. Restlessness to some degree was noted in 29 cases, and in many the result was good as far as amnesia was concerned. Thirst was present in 75 per cent. of the cases, vomiting in 20 per cent., and flushing of the face in nearly 90 per cent. Dilatation of the pupils was noticed in 21 cases, or about 25 per cent. No dangerous effects on the mother were observed.

As regards the *effect on labour* itself, there was a fairly constant diminution in the strength and frequency of the contractions after the first injection, sometimes lasting an hour or two, after which the uterine contractions appeared to follow their normal development. Bearing-down efforts were present in 55, feeble in 10, and absent in 15 cases. There seemed to be a tendency to delay in the latter part of the second stage, shown by the increase in the number of forceps deliveries, which were more than three times the average ruling in the ward. The placenta was expelled spontaneously in 41 cases and was expressed after expulsion from the uterus in 39 cases. Bleeding was stated to have been greater than normal in 9 cases, or 11·25 per cent. In 4 of these cases the bleeding was described as post-partum hæmorrhage. The cases seemed to indicate a slight tendency to increase loss in the third stage, though readily controlled, but it was impossible to ascribe the hæmorrhage as due to the narcosis alone. The condition of the patient after delivery was good throughout, and no case of shock or other dangerous symptom, except the 2 cases of post-partum bleeding, was noticed.

Effect on the child.—There were 3 cases of still-birth, two of which were due to causes quite independent of the narcotism; in the third the fœtal death was due to delay in the after-coming head. In 19 cases the child did not breathe or cry spontaneously at birth, but in 9 of these the delay was so trifling as to be scarcely worthy of notice. In 6 cases external stimulation, and in 3 a hot bath were sufficient to start respiration at once. Besides these cases, in 16 there was blueness of the child for the most part trifling in character and of slight duration. Regarding pituitary extract given before birth as a contributory cause of difficulty in starting respirations, it was thought not to add appreciably to the danger to the child. There were 3 cases of *cardiac disease*. In one of which the patient had been in the medical wards for several weeks owing to failure of compensation. In all these cases the partial narcosis had a beneficial effect on the patient. Out of 13 cases in which a general anæsthetic was given at the end of the second stage, complete amnesia occurred in all but one, or in 92·3 per cent. If the pain of expulsion brings the patient to consciousness the amnesic effect is lost; probably all the 26 cases classed as partial amnesia and a proportion of those in which no amnesia was obtained would have been classed as complete had the actual birth been conducted under a general anæsthetic; but given for this purpose, the second stage would no doubt be prolonged and the number of forceps deliveries increased, but the percentage of complete amnesia would probably have been raised to 90 per cent.

Captain FAIRBAIRN also read a report on 20 cases from the General Lying-in Hospital, York-road, in which the results were in general the same as those obtained at St. Thomas's Hospital.

Dr. C. HUBERT ROBERTS read a report on 67 cases observed by himself and Dr. T. G. STEVENS at Queen Charlotte's Hospital.

Amnesia.—The results were good. In 90 per cent. the pains of labour were diminished; complete amnesia was obtained in 46·2 per cent., partial in 44·7 per cent. Analgesia was complete in 32 cases, partial in 31. There were 2 failures. Indications for commencing treatment were

the character of the pains, which should be regular and strong. The size of the os could not be taken as a guide.

Dosage.—The number of injections varied. Three patients had only one injection, whilst one had ten. In all cases but one the pains were good at the time of the first injection. Indications for repetition of the hyoscin injection seemed to be the patient's general condition and the frequency of the pains. In no case was a second dose of morphia given. The memory test could not be relied on; further observations on the corneal and plantar reflexes were of minor importance in drawing conclusions. Considerable experience was required by the practitioner in the treatment of cases of twilight sleep; the same remark applied to nurses who, if left in charge of such cases, should be carefully trained in the routine beforehand, as it was more than possible that dangerous results might supervene if the giving of morphia and hyoscine were left to inexperienced persons. Any case of twilight sleep demanded the constant attendance of the doctor.

General effects on the mother.—Mental confusion, thirst, and restlessness were observed in about half the cases, but no active delirium. Labour did not seem to be prolonged after giving the first injection. Any prolongation which was noted in their series occurred before the injections were given. Out of the 67 cases there were 12 forceps deliveries, but the indications were due to obstetric complications, such as occipito-posterior positions or large head, and not due to the effects of the drug on uterine contractions. The placenta was spontaneously expelled in 65 out of the 67 cases, there being evidence that uterine contraction and retraction were not interfered with. There were two cases in which there was hæmorrhage in the third stage, one due to an adherent placenta, the other to a low-lying succenturiate placenta. These cases could not be laid to the door of the narcosis alone. The puerperium in all cases was undisturbed, nor was involution retarded.

Effects on the child.—In 53 out of 68 babies (one case of twins) breathing or crying was noted as spontaneous. In 13 cases the baby was described as blue, but in one instance only was there cause for alarm. Most of the blue babies at birth were limp but soon recovered. Hot baths and artificial respiration were only required in the minority of cases. Violent resuscitative methods for such babies were to be deprecated. Three babies died; of these, two were premature and one died of broncho-pneumonia on the sixth day. There were three cases of white asphyxia with forceps deliveries, due to delay from obstetric complications and not to the drugs used. A definite opinion on the effects of hyoscine and morphia on lactation could not be given owing to the short stay of patients in the hospital. Of the 64 living babies who left the hospital, 49 were breast fed and 34 had regained their birth weight during the first week.

Mr. GORDON LEY read a report on 135 cases of twilight sleep at the City of London Lying-in Hospital observed by Dr. COMYNS BERKELEY and himself.

Dosage.—Of the 135 cases reported on, 128 were primiparæ and 7 multiparæ. The first injection was given with the cervix two fingers dilated and the pains strong and regular. The dosage was that agreed upon. The second dose was given three-quarters of an hour to one hour after the first and succeeding doses at hourly intervals. The number of injections varied from 1 to 53, with an average of 13·1. Morphia was repeated in 1/6 gr. dose in 7 cases when consciousness was being gradually regained, and produced a satisfactory return to the twilight state. The memory test was applied in all cases and was found generally unsatisfactory.

General effect on mother.—Catheterisation was, as a rule, necessary during labour. Complete amnesia was produced in 47·4 per cent. of the cases; partial amnesia in 45·2 per cent. Complete analgesia was produced in 8·2 per cent.; partial analgesia was present in 42·9 per cent., excluding, in each case, those patients in whom there was complete amnesia. Thirst was present in 63 per cent. of the cases, nausea and vomiting in 24 per cent. Mental confusion was marked in 24 per cent., slight in 34 per cent. Restlessness was considerable in 25 per cent., slight in 17 per cent. Excitement was present in 35 per cent., and a small proportion of these were maniacal. Pulse and respiration were never affected. In 34 per cent. the pains appeared subnormal, and in 1 case there was complete suppression. The interval between the pains was in all cases normal. Bearing-down efforts were, as a rule, subnormal; they were good in 44 per cent., fair in 3 per cent., slight in 40 per cent., very slight in 3 per cent., and absent in 10 per cent.

Labour.—There was prolongation of the second stage of labour. Compared with the average percentages of the hospital, the number of forceps cases was increased; perineal tears were greatly in excess (due to the difficulty of controlling the patient with the head on the perineum), and there was an increased failure of occipito-posterior positions to undergo spontaneous rotation, attributable to the lack of bearing-down efforts which, combined with strong pains, are so important in the spontaneous rotation of these positions. The third stage was unaffected.

Effect on infant.—In some cases, especially when chloroform was given, there was a disinclination to breathe, associated with cyanosis and general limpness. Three children were still-born. In one the pregnancy was only 32 weeks advanced. In the other two death was almost certainly due to intra-uterine pressure from the drainage away of the liquor amnii. Of the children born alive the subsequent condition of 129 was satisfactory. Six died within the first 20 days of life, but in none could it be said that the treatment played any part as a cause of death. From the point of view of the practitioner, it must be remembered that the number of forceps cases is considerable, and are relatively difficult owing to the fact that the diminished bearing-down efforts fail to force the head deeply into the outlet, or fail to rotate occipito posterior positions, which therefore require manual rotation before extraction. The condition of the baby may cause grave anxiety to the inexperienced, and deaths are likely to be produced by too vigorous treatment. The constant attendance of the doctor and the absolute necessity of having a nurse skilled in this line of treatment cannot be impressed too forcibly on patient and friends. The treatment requires considerable experience both of the method itself and of midwifery, and it appears probable that it should be withheld in all cases except those in which the capacity of the patient for bearing pain is greatly below normal, and is evidenced early in labour.

Discussion.

The discussion which followed Dr. W. A. POTTS said never had nausea or vomiting with his cases. He thought the restlessness might be due to overdosage with hyoscine. He always gave morphia gr. 1/4 to 1/6, and hyoscine gr. 1/200, and for subsequent doses of hyoscine gr. 1/200 at 2-hourly or longer intervals. If the patient were not under at the third dose he gave a whiff of chloroform, and in this way could make a success of any case. He usually used chloroform at the end of labour, giving the last dose at some considerable interval before the child was born, so that at that time the patient was just coming from under its effects. It was essential that the patient be given water at intervals when the labour was prolonged, and it was advisable to let her come out from the influence of the drugs and have a meal and then start the administration again. This diminished the tendency to uterine inertia. He had only had one case of post-partum hæmorrhage and that was probably due to slight capillary oozing from a small laceration of the cervix. He had not found an increased use of the forceps necessary.

Dr. W. O. GREENWOOD said that out of a series of 240 cases he had only had two complete failures. He thought that his success depended upon frequent and rigid testing of the patient. The dose could be standardised, but the patients differed in their reaction to the drugs. He had used morphia gr. 1/4, and scopolamine gr. 1/100. Only highly nervous patients needed larger doses. He thought gr. 1/450 too small a dose on the whole. He thought that if amnesia was perfect it was safe to say that there was some analgesia.

Dr. J. M. BRYDONE thought the method could be made an absolute and complete success from the patient's point of view. A little chloroform at the start was a great help. He had never given more than three injections. He had had no trouble with the babies. He had found the memory test unsatisfactory.

Dr. ROBERTS recapitulated the points of the paper by Dr. Stevens and himself. The method had given good results. Pain was diminished in practically 90 per cent. Administration should be begun when pains were regular and strong. The size of the os was no guide. Judgment was necessary with regard to the number of injections to be given. Repetition depended upon the condition of the patient and on the pains. Further observations were necessary to determine the value of the memory test. The corneal and plantar tests were of minor use. Training of physician and nurse was very necessary. Constant attendance on the part of the physician was needed. Prolongation of labour was not marked in their series. Warmth and quiet were all that were needed for the baby.

Lady BARRETT said that in a series of 30 hospital cases she had always given morphia gr. 1/6. Patients had rarely failed to remember objects shown, but many had amnesia with regard to labour. She had had greater success by giving small amounts of chloroform at the end of labour, so that the last few pains were not remembered. There had been no case of post-partum hæmorrhage. The only still-birth was a small premature child.

Dr. COMYNS BERKELEY said that the memory test was no good. The only danger to the child was in trying to revive it. Strict supervision was necessary.

The PRESIDENT said that the method was by no means devoid of danger. Hyoscine was a dangerous drug owing to an idiosyncrasy towards it on the part of certain people, and once given hypodermically it could not be recalled. And on top of this dangerous drug chloroform was given as a general anæsthetic. The morbidity increased with the number of forceps cases. There was an increased morbidity of the mother, an increased mortality of the mother, and increased mortality of the baby.

Captain WILLIAMSON said the method was valuable in suitable and selected cases. It should be administrated after every precaution was taken, and only by those who were competent to deal with any obstetrical emergency which might arise.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A well-attended meeting was held at the West London Hospital on Dec. 7th, Dr. A. J. Rice-Oxley being in the chair.—Papers were read on (1) Methods of Detecting Simulated Deafness, by Mr. Richard Lake, and (2) Methods of Detecting Simulated Blindness, by Mr. Percy Dunn.—A discussion followed, from which it emerged that these forms of malingering were very uncommon in the British Army, as far as the experience of the members present went.

HUNTERIAN SOCIETY.

The Medical Classification of Recruits.

A MEETING of this society was held on Dec. 6th at the Royal Society of Medicine, Wimpole-street, Mr. HUGH LETT, the President, being in the chair.

Captain HALDIN DAVIS, R.A.M.C. (T.F.), opened a discussion on the Medical Classification of Recruits. He showed how the problem has changed since the beginning of the war. At first the difficulty was to prevent unfit men from getting in, while now the problem is to ensure that no useful individual may be left out. He traced the steps by which the present system of grading recruits in various categories had arisen and explained the provisions of the different Army Council instructions bearing on this subject. He ascribed most of the troubles which were made by the Recruiting Medical Boards under the War Office to two causes: First, the great rush of work, which necessitated sometimes as many as 300 recruits being examined in one day; and, secondly, to the fact that they were provided with no general instructions as to the lines upon which they were to proceed and the consideration to be paid to the different conditions they might meet with. In both these matters, Captain Davis said, the boards working under the Ministry of National Service have a great advantage: Firstly, there is unfortunately no rush of recruits at the present time, and the boards are consequently not overburdened with work; and, secondly, they are provided with an excellent handbook of instructions which the Ministry of National Service, profiting by the experience of the War Office, have issued for the benefit of their commissioners and medical staff. There was no doubt that working under these conditions the Ministry of National Service would be able to obtain far more uniform standards throughout the country and give more satisfaction to the public. Captain Davis classified the defects which diminish but do not absolutely nullify a man's military value under the following heads: (1) deficiencies of the senses; (2) defects of the heart and lungs; (3) defects of other internal organs, especially of alimentary system; (4) defects of the nervous system; and (5) defects of the locomotive system—i.e., the spine and limbs. He pointed out as regards vision that, as the standard had had to be lowered considerably, it was a question whether a man with only one eye, but that eye perfect, should not be considered as eligible for category A. As regards cardiac defects, he was of opinion that the only useful criterion of fitness was reaction to work, and that the elaborate examinations of the heart made by modern methods were extremely useful. He mentioned the practical point that young recruits whose heart muscles seemed doubtful at first often improved on training, but that elderly ones—i.e., over 33 or 34—never did. Many of the latter can stand the first few weeks, but afterwards steadily degenerate. He emphasised the importance of good digestion to the soldier. While recognising the difficulty of detecting cases of gastritis by examination, he thought it was a pity that so many crept into the Army, and was of opinion that the best thing was to get rid of them at the earliest possible moment. As regards nervous diseases, the most difficult problem is the neurasthenic, who, in Captain Davis's experience, usually ended in the cookhouse. As regards the delicate question of certificates given by private medical practitioners, he was of opinion that the correct course for the practitioner to take was to refrain entirely from giving any opinion as to the fitness or otherwise of the patient, and merely to set down the physical signs found and the medical history during the time he had attended him.

Dr. RUSSELL WELLS said that if such papers had been read in the early days of the war much difficulty in connexion with the examination of recruits would have been avoided. Since February, 1916, the recruiting medical boards of London, at the desire of the War Office, had referred to the National Hospital for Diseases of the Heart doubtful cardiac cases for examination and report. Up to the present time 10,190 cases had been reported on. The name, age, and occupation of each recruit, and a statement of how he felt, in his own words as far as possible, was recorded. A careful history of his previous diseases, habits, and subjective symptoms, such as dyspnœa, pain, palpitation, vertigo, faintness, sleeplessness, &c., was taken. This part of the examination, depending, as it did, on the man's truthfulness, though important, could not be given as much weight as the rest of the report. The urine was examined. The recruit had his pulse-rate, blood pressure, and rate of respiration taken in the recumbent position and was then made to run up and down stairs, so as to raise his body 20 feet vertical in 30 seconds; immediately afterwards the pulse-rate, blood pressure, and respiration were taken again. After resting in the recumbent position for three minutes pulse, blood pressure, and respiration were again recorded. He was then weighed and his electrocardiogram taken. After this his heart was examined by the screen with X rays, with due precautions as to centering the tube, a record being made of its size, shape, position, and transverse diameter. After this he was examined by the usual clinical methods, the observations being noted under the headings of inspection, palpation, percussion, auscultation, and the state of other organs, in so far as they related to the cardiac condition. A diagnosis was stated and a recommendation as to category made, the classification, however, properly remaining entirely in the hands of the board sending the recruit for examination. In every case the full record with a print of the electrocardiogram was sent to the board and another copy filed at the hospital. The staff of the hospital were engaged on a detailed analysis of the first 10,000 cases, with a view to ultimately publishing the results, and he felt he must not allude to their conclusions, but a few of his personal observations might be mentioned. First, in the great majority of instances the cases sent to the hospital were really doubtful ones. Taking a straightforward lesion like aortic regurgitation as a test, the fact that out of the 10,000 men under 300 presented "aortic" diastolic murmurs, many of these being difficult cases, showed how carefully the boards had eliminated well-marked instances of heart disease. Drugging with a view to disturbing the heart's action, and so avoiding military service, was, he thought, not common, and was far easier to detect than was usually supposed. He gave an amusing instance of quinine being discovered in a recruit's urine, when the man confessed that he had taken two eggcupsful of ammoniated tincture of quinine "to keep himself up." He detailed the symptoms which in his experience followed the improper use of the nitrites, cordite and the like, and pointed out how they could be distinguished from genuine disease. Most of the drugs suggested as likely to be used chiefly affect the pulse-rate; and if there was one thing more than another that had been borne in upon him in the course of this work, it was the slight importance of a rapid pulse at the time of examination. Few, he thought, realised how greatly or how easily the pulse might be accelerated; nearly all normal hearts accelerated on exercise, the increase often being as much as 20 to 25 per cent. or even more, and practically always in normal people the blood pressure rose on exercise; a rise of pulse-rate with a fall of blood pressure on exertion was the bad sign. Captain Haldin Davis had said that the soft heart of the young improved with training, but that the same sort of heart in the man of 35 broke down, and he expressed his complete agreement. The slightly anæmic indoor worker who complained of shortness of breath on exertion and had a localised systolic murmur at the apex, was a very common type; he was "the atonic heart of the indoor worker." If the heart was not notably enlarged and the arteries were healthy these men greatly benefited by training, provided it was not too rapid. On the other hand, some arterial thickening was much commoner than he at any rate was formerly aware. Frequently an examination of the little bit of the radial artery accessible to the finger revealed nothing abnormal, but if the brachial artery was felt from the elbow to the axilla, marked thickening could be detected. He had seen many cases of definite arterio-sclerosis in quite young men, and when the age of 30 was passed they increased in number. He would not enter into the debatable question as to whether those localised systolic murmurs heard from the xiphoid to the apex but not conducted out, which were frequently classified as functional, originated at the mitral or tricuspid orifices, but felt convinced that in very many cases they were due to regurgitation as the result of the lax condition of the cardiac muscle. In men over 30 it was not very uncommon to find a really large heart which seemed to lie on the diaphragm; these men were frequently fat and usually dyspnœic on slight exertion. Often no murmur could be heard, sometimes a soft localised systolic murmur at the apex could be elicited by exercise; arterial

thickening was frequently absent, and they seemed to him to constitute a distinct class worthy of investigation. The present general examination of the population for military purposes afforded a unique opportunity for medical research, and he felt that if Army medical officers would examine the men under their charge from time to time and record how those with the various slighter forms of cardiac de angement stood the fatigues of training and active service cardiology would be greatly advanced.

Dr. F DE HAVILLAND HALL suggested that the formation of a probation camp to which men of doubtful physique could be sent and kept under observation would save the country expense and the individual needless inconvenience. The majority of the men would almost certainly improve under careful training, whereas the unfit could be weeded out and returned to civil life. He thought it essential that the urine of every applicant should be tested, as men with albuminuria were unsuited for exposure to wet and cold coupled with great exertion. He was opposed to passing any man for active service with the signs of quiescent pulmonary tuberculosis, and he was of opinion that at least six months should elapse in the case of a man who had had pleurisy before he was passed.

Major DUNDAS GRANT also spoke.

Reviews and Notices of Books.

Midwifery. By Ten Teachers. Under the direction of COMYNS BERKELEY, M.A., M.D., M.C. Cantab., F.R.C.P. Lond., Obstetric and Gynæcological Surgeon to the Middlesex Hospital, &c. Edited by COMYNS BERKELEY, H. RUSSELL ANDREWS, J. S. FAIRBAIRN. With 303 original illustrations and 4 coloured plates. London: Edward Arnold. 1917. Pp. x. + 735. Price 18*s.* net.

THIS book is an interesting experiment in combined authorship. It is the result of the coöperation of ten teachers in London medical schools. According to the preface, the whole corps has acted in an editorial and revisional capacity on every chapter and section of the book, both text and illustrations. As nearly all the authors are, or have been, examiners, the book will certainly be popular among students; it will be read with interest, too, by those teachers and examiners who are not among the number of the corps. The result of this method of authorship must be largely of the nature of a compromise, and the book is an eminently safe guide to the practice of midwifery. It contains nothing very startling and nothing very novel, and therefore is well adapted for the use of the student. These very qualities, however, render it less interesting than if it were the work of an individual or contained the teaching of a single school It is divided into five sections dealing respectively with Pregnancy, Normal and Abnormal; Labour, Normal and Abnormal; the Puerperium; the Newborn Child; and a final section dealing with the various Operative Procedures.

We notice that the authors do not accept the view that the cells of the membrana granulosa are derived from the germinal epithelium, but describe them as of stromal origin. The account of the height of the fundus of the uterus during pregnancy differs very markedly from the figure given to represent these levels. In the figure the height of the fundus of the uterus at the twelfth week is shown as about 3/5th of an inch above the symphysis pubis, instead of 2 inches as it is given in the text, and at the twenty-fourth week it is shown in the figure as at the level of the umbilicus while it is described in the text as above that level.

It is always interesting in a book of this kind to read the accounts of the treatment of some of the more important accidents of childbirth. We think it a pity that the authors should figure and describe plugging the vagina in a case of placenta prævia, as the second alternative they give is much less dangerous and so much more effective—namely, dilatation of the cervix with dilators and the immediate introduction of a de Ribes bag, or the performance of version. In the chapter on accidental hæmorrhage plugging the vagina is strongly recommended for this accident; for many years the majority of London teachers were opposed to this practice, and many of them will be surprised at so complete a *volte face*. In the diagnosis of a contracted pelvis we are told in the text to introduce the right hand into the vagina, but in the figure illustrating this procedure, to which no legend is affixed, the left hand, which is much the better hand to employ with the patient on her back, is shown in the vagina. The description of internal and external cephalic and bipolar podalic version is very short and suffers as a consequence. Nothing is said of the advantage of using sometimes the left or sometimes the right hand in the vagina or of placing the patient in some cases on her back and in other cases on one or other side and employing internally whichever hand is most suitable. The description given has the merit, for the student, of being short, but he will find it of no great use to him in the performance of a difficult version. We strongly dissent from the advice to take hold of the handles of the axis-traction forceps as the head is emerging over the perineum; this is unnecessary and even bad practice.

The method advocated of rotating the head in an unreduced occipito-posterior position is not so effective as that of seizing the head between the thumb and fingers, to which there seems no valid objection, and it is certainly most efficient. The authors adopt the terms "sluggish uterus" and "exhausted uterus" for primary and secondary inertia, because they think that the use of the term secondary might lead the reader to imagine that it was so called because it follows the primary variety. It may, however, be objected that a uterus the subject of primary inertia is not always sluggish, the contractions may occur relatively often, but may be quite ineffective. The two expressions "sluggish" and "exhausted" serve as very fair descriptions of the two conditions, but we think it would be a pity if such well-known and classical terms as primary and secondary inertia were abandoned.

We have been deliberately critical, so that the authors may, if they think well, introduce modifications in the future editions which they will certainly be asked to supply. There is no intention of bringing together all the fault finding in order to depreciate a book, which is a very creditable production likely to be of great practical value. The illustrations are good and well drawn, and there is a full index.

JOURNALS.

Psychobiology. Vol. I., No. 1, July, 1917. London: Cambridge University Press; Baltimore: Williams and Wilkins Co. Bimonthly, $5.50 per year.—This is a new journal devoted to the field common to psychology and the biological sciences. The editorial staff is representative of some of the leading investigators among the university staffs of the United States, and in their opening announcement they declare their aim as the furtherance of research bearing on the interconnexion of mental and physiological functions; they welcome investigation in pharmacology, physiology, anatomy, neurology, and psychiatry in so far as it has explicit specific relation to problems of mental life. The number with which the venture opens contains several papers, reference to the titles of which will give the reader sufficient indication of the scope of the journal. Dr. S. I. Franz and Dr. K. S. Lashley, of the psychological laboratory of Johns Hopkins Hospital, record experiments on the retention of habits by the rat after destruction of the frontal portion of the cerebrum; Dr. D. I. Macht and Dr. S. Isaacs have a paper on the action of some opium alkaloids on the psychological reaction-time; Dr. R. Ogden and Dr. S. I. Franz describe a series of investigations on the recovery from experimentally produced hemiplegia in apes. We congratulate the editors on this inauguration of an attempt to bring physiology and psychology closer; it is, in a way, a protest and a reaction from the teaching of a school of psychology which lives in a world of concepts, ignoring the fundamental basis of its own science.

Veterinary Review. Edited by O. CHARNOCK BRADLEY, M.D., D.Sc., M.R.C.V.S. Vol. I., No. 4. November, 1917. Price 3*s.* 6*d.*—Professor Bradley, the principal of the Royal (Dick) Veterinary College, Edinburgh, in the *Veterinary Review*, gives to the professions of human and veterinary medicine a résumé of all the latest work done in comparative science at home and abroad. Abstracts have been made from every branch, including anatomy, hygiene and preventive medicine, parasitology, surgery, serology and immunology, infectious diseases, toxicology, and teratology. The worker who wishes at a glance to know the latest which has been done, after consulting this Review may be able to put his finger on the full details which he desires without searching through a lot of tedious literature. The November number is well up to the high standard of its predecessors.

THE LANCET.

LONDON: SATURDAY, DECEMBER 15, 1917.

The Repair of the Nose and Jaws.

THE problems presented to surgery in the present war, though mostly having a counterpart in lesions met with, more or less frequently, in civil practice, differ from them generally in the extent of the lesions which have to be treated, and also in the very large number of analogous cases of different groups with which the surgeon has to deal. It is therefore not surprising that expedients have been devised and methods have been invented to which the experience of previous civil practice and earlier wars had not given rise. That is only to say that intensive study has evolved pertinent remedy. In THE LANCET of last week papers by Major H. D. GILLIES and Captain KELSEY FRY appeared which described the new departures in surgery resulting from the special care of cases of severe facial injury at the Queen's Hospital, Sidcup, and this week two more papers belonging to the same category are published, one by Captain J. L. AYMARD and one by Lieutenant G. SECCOMBE HETT. Every reader will agree that the ingenuity and the skill of the operators are worthy of the highest praise. The results are both wonderful and suggestive, and it is difficult to say which is the more remarkable—the improvement in the cosmetic appearance or the benefit in many cases to the functional utility.

The papers all deal with the repair of the injuries of the jaws and of the nose, and are so clear in their message that nothing but the importance of that message justifies our emphasising it. In the carrying out of the procedures for the repair of the jaws and of the overlying soft parts the fundamental principle must be grasped that the surgeon and the dental surgeon should participate in the work, if the best results are to be obtained. The surgeon will make the flaps, he will implant pieces of bone and cartillage, but unless he has the skilled assistance of the dental surgeon he cannot obtain perfect replacement of the fragments which only the work of the dental surgeon can give; the coöperation of the two is essential, while at any stage the help of the artist is of enormous value both for the devising of procedure and for the visualising of an ideal. In each direction Professor TONKS'S aid to the surgeons has been striking. When the injury to the lower jaw has been great, it is necessary that some rigid support shall be added to replace the lost bone When the loss is less it may be possible, by careful attention to the position of the fragments, to obtain bony union, but natural consolidation may be the work of months, and the expectant treatment thus become worse than more thorough dealing with the condition. But fragments of bone almost separated from the soft tissues may survive and assist in the union of the bone, and it is therefore of great importance not to remove unnecessarily any pieces which give the least hope of survival. Yet to obtain a useful jaw the fragments must be placed and held in a position suitable for their consolidation. Good results can here be got by the employment of dentures and other forms of splints so designed as to keep the fragments in position. When, however, it is clearly hopeless to expect bony union of the fragments, on account of the large loss of bone, other methods have to be employed. A rib offers great advantages for replacing a portion of the mandible. An osteo-cartilaginous graft can be used and can be so placed that the point of its greatest convexity is in the site of the chin, but in all these elaborate cases it is essential that the soft parts shall be fully formed before the bone or cartilaginous transplant is placed in position. To provide the new soft tissues is not always easy. The cheek can supply only a limited amount of new tissue; if more is taken the resulting deformity will be as conspicuous, nearly, as that which it was proposed to set right. Flaps have to be taken from other parts, and here the ingenuity of the surgeon is greatly called upon. Major H. D. GILLIES has employed single- and double-pedicled bridge flaps cut in many new methods. A single-pedicled bridge flap is, of course, made by the transference of a broad flap of skin from a neighbouring part over untouched skin, and after ten days or a fortnight, when the flap has taken a firm hold in its new position, the pedicle is divided from the transplant and then replaced in its former position. Major GILLIES has improved on this idea; he has employed double-pedicled bridge flaps. A broad band is taken, for instance, from the scalp; it remains attached at the two ends, it is then turned down into the new position, and there it is fixed by sutures. The flap benefits by the double blood-supply, so that the risk of sloughing is markedly reduced. When the flap has taken firm hold the pedicles are divided and replaced in their former position. In this way Major GILLIES provided one of his cases with a new lower lip and chin, and as the flap was taken from the scalp the patient had a beard also, while a bald head is left for future treatment. Captain FRY'S paper dealing especially with fractures of the upper jaw shows how it is necessary in such cases to support the skin of the face so as to hold it out in the right position. Here the art of the dental surgeon comes into play, for only by means of a prosthetic appliance can the appearance of the face be regained. By steady expansion of the splint the soft parts are moulded, with the happy results displayed last week by Captain FRY'S pictures.

The papers published this week deal especially with the repair of the nose. Lieutenant SECCOMBE HETT has contributed a valuable note on the utilisation of portions of the walls of the nose to repair nasal deficiencies. For instance, he takes a portion of an inferior turbinal bone to fill a gunshot perforation of the hard palate. In cases of the loss of the upper part of the bridge of the nose the middle turbinals

have proved useful for filling the hole and also for supporting a skin flap. The inferior turbinal has formed the base of a new ala, even when it has had to be put on the other side of the nose, a left turbinal being transferred to the right ala. In one case, where the bridge was greatly depressed with undue prominence of the tip, the tip was lowered by removal, a submucous resection was made of the septum, and the removed cartilage was utilised to obliterate the depression. Sometimes the sunken nose can be raised by a piece of septal cartilage removed from another case, and a piece of costal cartilage may be employed in the same manner. Captain AYMARD'S article deals with the same subject. He shows what conditions are necessary to produce good results, and he describes how to form the framework and how to provide the soft structures. Sometimes he forms the new nose on the patient's shoulder, and then transfers it by means of a long pedicle to the face. A paper read by Mr. PERCIVAL COLE before the Medical Society of London last week, which we shall publish shortly, gave many striking examples of the manner in which skin can be employed to replace mucous surfaces, and in this way most valuable developments in use and appearance are obtained. Only those who have seen these cases before and after the operations can appreciate fully the good that can be done. Infinite patience on the part of the surgeon and the patient is needed to obtain the desired results, but these may be very good, and we all must rejoice that so much can be done for our men mutilated in the war.

The Nursing Profession and Voluntary Registration.

JUST as sick-nursing, as we now understand it, took its origin in one of the most disastrous war campaigns of the nineteenth century, so the martial conditions of the last three years are likely to bring about a change of a permanent nature in the profession of nursing. It is true that there has been continuous effort on the part of public-spirited people for nearly 50 years to fix a recognised standard on sick-nursing by Act of Parliament, and in so doing to protect the public against inefficient and fraudulent service, whilst assuring a definite status to the nurses themselves; but the movement failed by reason of the lack of unanimity among nurses and others interested in nursing as to the need for State registration and the advantages to be derived from it. Nor was this to be wondered at since the work of a nurse is of so varied a character that opinion is sure to be divided as to the nature and details of the training to be provided. Obviously the qualification required by a hospital sister is widely different from that desirable for a district nurse or one attached to a tuberculosis dispensary. For the moment at least any standard imposed upon nurses from without by an Act of Parliament appears unattainable in view of the fact that no measure except an agreed one can hope to get through; but the support which is being given by nurses of all shades of thought and kinds of practice to the College of Nursing, which owes its origin to the indefatigable energy of Sir ARTHUR STANLEY, shows the need which is keenly felt by the nursing profession for some central unifying association.

Since the objects of the College have recently been the matter of some controversy it may be well to recapitulate them here. On the printed application for registration they are stated to be:—

1. To organise the nursing profession.
2. To secure State registration for the trained nurse.
3. To make and maintain a register of trained nurses, and by this means to protect the public.
4. To protect the interests of trained nurses.
5. To raise and maintain the standard of training.
6. To establish a uniform curriculum of training and one portal examination.
7. To establish lectureships, scholarships, and in every way to promote the advancement of the nursing profession.

The concrete advantages of this programme have nowhere been more persuasively stated than by Miss V. MATHESON, secretary of the Irish Board, at a meeting held in Belfast on July 26th, and now republished as a pamphlet.[1] Miss MATHESON describes her article as a nurse's talk to nurses, and we are content to leave her to address her own proper audience; but we cordially endorse her view that it is essential for the body of nurses as a whole to have some outward expression of their ideals, and apart from the work of each as an individual. Some nurses, she rightly observes, find this expression in their hospital training school; but hospitals bound by their constitutions are obliged to devote their funds primarily to their patients; and there is seldom any surplus available for the interests of their nursing staffs, although undoubtedly the services rendered by probationer nurses as wardmaids and scrubbers save the hospital management many thousands of pounds a year. Miss MATHESON asks for a centre of nursing education at which examinations shall be held, scholarships offered, and where interchange of information and advice is always available. Those who have worked unavailingly for a one-portal entry to the medical profession will be the first to see the advantages of this desirable unification for nurses. These things are included in the programme of the College of Nursing, which has already obtained a voluntary register of over 7000 nurses, all of whom have produced evidence of efficient training in general civil hospitals.

We believe that the time has come when all those who have the real interest of nursing at heart, as well as the imagination to see how these interests can best be furthered, may well unite in assisting such a scheme of voluntary registration as a first step towards the raising of the status of the nurse and of giving her the standing which is her due. In saying this we are in full unity with the contention that any body which claims to control the training and registration of the nursing profession should be elected by nurses themselves on a wide basis representing all kinds of nursing activities. The permanent Council of the College of Nursing is to be elected on this basis, and we see no reason to doubt that the nurses who are now

[1] The College of Nursing: A Nurse's Talk to Nurses. To be obtained from the Secretary, 6, Vere-street, London, W. 1.

registering will be able to impress their wishes upon any temporary nominated Council. In fact, if voluntary registration becomes general, the position will be unassailable. This implies the laying aside of any personal feeling which may have been present on either side. Change of feeling, brought about by the introduction of new factors into the question, will be regarded as a token of public spirit and not as a sign of weakness or illogicality.

Annotations.

"Ne quid nimis."

THE WEEKLY HOURS OF EMPLOYMENT OF MUNITION WORKERS.

THE investigations of the Health of Munitions Workers Committee, presided over by Sir George Newman, have produced already, and will continue, no doubt, to produce, results of not merely transient and immediate interest or importance. It was appointed to consider and advise on questions of "industrial fatigue, hours of labour, and other matters affecting the personal health and physical efficiency of workers in munitions factories and workshops." The conclusions arrived at by it will serve as a guide to those who regulate the hours of industrial work long after the immediate urgency of bringing the output of war material to the highest point attainable has ceased to confuse the issues involved and to prejudice the opinions of those anxious for the country's safety. In its Twentieth Memorandum (Cd 8801) the committee deals with "weekly hours of employment," its observations being thus supplementary to those recorded in Memorandum 5, in which "hours of work" were considered, as well as to those in its First Memorandum, issued when the urgent demands of the Army had led to ceaseless toil throughout the week and made the expediency of Sunday labour a pressing question for employers and employed. The committee now can review its past conclusions in the light of experience collected during two long years; it is able to take into consideration with the actual facts before it the effect of labour prolonged not through months but through years, and to judge with regard to women's work from its effect upon a hugely increased number of subjects engaged upon a greater variety of processes than formerly. The general tendency of previous memoranda has been to show that a point will always be reached in the work of men, women, and the young alike, at which longer hours spent in the factory fail to increase output, and at which, if the hours of labour are made longer still, the productiveness of the worker will actually be diminished. Fuller, more complete, and more accurate data gathered from the actual experience of those most interested in watching the productiveness of individual factories have confirmed this opinion. The committee is now able to report, with particular reference to the week as distinguished from the day, that a reduction varying from seven hours to 20, where it has been tried, has in no case had for its result more than an insignificant diminution of total output, while on the average it has produced a substantial increase. Alterations of hours may have different effects in different operations, and experience must decide in each case the exact limit which cannot safely be exceeded, but that the hours worked weekly can, as a rule, be reduced with advantage to a total of from 50 to 55 hours is a general conclusion summarised in paragraph 6 of the Memorandum now before us. In connexion with the question of production account has to be taken not merely of the slackness of work, voluntary or involuntary, which is the natural result of long and continuous toil, but of the loss of time caused by absence through sickness, and by bad time-keeping. Nor should it be forgotten that the sickness of the worker not only affects his or her immediate personal comfort, but may diminish earning capacity during future years. Long hours, moreover, are responsible not only for actual physical breakdown, but for nervous irritability tending to increase industrial unrest, as well as for such undesirable social conditions as are likely to affect those whose homes become merely sleeping-places for overweary persons. The committee therefore reviews its opinions formerly expressed, having convinced itself that the maximum limits of weekly employment already suggested by it are too high except for quite short periods, and advises that, regard being had to all the circumstances of particular cases, more reduction may safely be made. It is further of opinion that the time is favourable for such reduction to be brought into effect, with benefit to the workers' health and without injury to that sustained output upon which our existence as a nation may be said to depend.

SERUM DISEASE IN CEREBRO-SPINAL MENINGITIS AND DIPHTHERIA.

WE published in a recent issue of THE LANCET (Dec. 1st) three interesting communications on the subject of serum disease and the rashes associated with it. Two of the papers, those by Surgeon-General H. D. Rolleston, R.N., and Dr. Claude Ker, were contributions to the discussion before the Royal Society of Medicine on the Manifestations of Serum Disease which may Follow Intrathecal Injections. There is a striking concord between the results arrived at by these two observers, and as their papers contain some valuable practical suggestions they deserve to be widely read. Surgeon-General Rolleston records that in 96 bacteriologically proved cases of cerebro-spinal fever occurring during the third year of the war and treated by serums a serum reaction occurred in 58, or 60 per cent., of those who survived for ten days or more. In nine of these cases, or 15·5 per cent., the serum rash was preceded or accompanied by a definite recrudescence of meningitic symptoms. It is now well recognised that injection of serum into a healthy intrathecal space produces an aseptic meningitis, and it is established that such a serotoxic meningeal reaction after intrathecal injections in cases of cerebro spinal fever, as in the 9 cases here mentioned, may give the symptoms of a recrudescence of the disease, and that under these circumstances a fresh injection of serum may aggravate these manifestations and do harm rather than good. Surgeon-General Rolleston suggests that a decision as to whether more serum should be given or not can be made by examining the cerebro spinal fluid for meningococci, which would indicate the existence of an actual exacerbation, or by examining for glucose, which would be present in the serotoxic reaction, absent in a relapse of the meningitis. He further points out that this meningeal manifestation of serum disease only

develops after intrathecal injection, and he emphasises the importance of a general recognition of its occurrence. Dr. Ker arrives at almost identical conclusions. He observed serum sickness in 36 out of 48 cases of cerebro-spinal fever who lived 9 days or more—i.e., in 76 per cent. He only observed an aggravation of the meningeal symptoms during the serum sickness in two cases, though he found increased turbidity of the cerebro-spinal fluid and other indications of meningeal reaction in several others. In all of these cases the fluids withdrawn reduced Fehling's solution, and he emphasises the convenience of this test. Both Surgeon-General Rolleston and Dr. Ker point out that in spite of the frequency of rashes after intrathecal injection of serum, it is not established that they are more frequent than after subcutaneous injection. Dr. Ker discusses the effect of sharp attacks of serum sickness upon the course of the disease, and states that he regards them as advantageous rather than otherwise. He is convinced that in diphtheria a smart serum reaction, especially when accompanied by pyrexia, is often of great benefit to a patient with feeble pulse and subnormal temperature, and he thinks that many patients with cerebro-spinal fever are improved by these reactions. The third communication is a letter from Dr. Frederic Thomson giving some interesting details of the rashes occurring after the administration of anti-diphtheritic serum, showing that they are still very frequently observed and that a circinate erythema is not uncommon, being next in frequency to the urticarial type of rash. These interesting observations on serum disease and its significance should stimulate further investigation.

THE INTRAMUSCULAR INJECTION OF CALOMEL IN THE ENTERIC FEVERS.

IN the *Annali de Medicina Navale* for July Captain Galatà, of the Medical Department, Italian Navy, recommended the treatment of enteric fevers by intramuscular injection of calomel. The treatment which he laid down is commenced in the first week of the disease, and 1·5 gr. of calomel is injected into the muscles of the buttock on the first and seventh day, 0·75 gr. on the fourth and tenth; the calomel is slowly absorbed at first but later more markedly; after the third injection temperature falls, the nervous symptoms decrease, and by the fourth injection the patient is almost well. He used this treatment with great advantage in seven out of nine cases of different infections which recently came under his notice.

EYE-STRAIN AND THE CINEMA.

OF recent years the cinematograph has come to play a very important part in the entertainment of the British public, and the report of the Cinema Commission recognises it as a valuable means of education, but with certain drawbacks. The question of eye-strain has claimed a good deal of attention, and the Commission, besides recommending the continuous illumination of the hall by means of screened lights and short intervals of bright lighting between successive films, advises the formation of a special committee with representatives of the Illuminating Engineering Society to go carefully into the whole question. The luminous mist produced by tobacco smoking is a factor which greatly complicates the solution of the problem. Turning from the projecting beam to the films themselves, two defects especially have marred the comfort of the observer. There is, and probably always must be, the ordinary flicker due to the mechanical impossibility of avoiding flaws in the films, and in addition there has been until now what may be called a wobbling movement of the picture as a whole. The latter takes place either in the horizontal or vertical plane, and is a source of great annoyance to the observer and probably more detrimental to the eyesight than the flicker. Rapid movement of the eyes in following the image as it shifts across the screen soon becomes painful, and the quicker the movement the greater the discomfort. When the wobble is rapid the picture becomes very like what surrounding objects must appear to a person with nystagmus. Fortunately, a method has been discovered of annulling these oscillatory movements. We have had an opportunity of seeing the "cinematograph projection steadier," invented by Mr. John Dunlop, of Glasgow, by which remarkably steady pictures are produced. The invention is very simple, the film passing between rollers before it meets the projecting beam of light. Mr. Dunlop has certainly succeeded in overcoming in large degree the second of the defects we have alluded to and in relieving cinema eye-strain. Other reforms we hope will follow.

NEPHRITIS IN THE BELGIAN ARMY.

HITHERTO there has been a lack of information as to the occurrence of acute nephritis among the Belgian troops. This has now been given by Dr. Moret,[1] who has found it in about 1 per cent. of the army in the field. He states that this is not such a high proportion as that existing in the French and British troops, and that the latter have suffered most severely of all. He mentions the interesting point that latent albuminuria has been found in apparently healthy soldiers more frequently in the Belgian Army than in other armies. In the French Army Ameuille found latent albuminuria in 1·87 per cent. of the combatants and in 1 per cent. of the non-combatants. Macleod found it in 4·73 per cent. of combatants in the British Army and in 2·95 per cent. of non-combatants.[2] The Belgian Army shows 5·77 per cent. of latent albuminuria. He therefore expected that the incidence of acute nephritis in the Belgian Army would be higher than that of her Allies, and was relieved to find this was not the case. We should have supposed from this that he would have come to the conclusion that latent albuminuria had no real connexion with acute nephritis, but was of the same order as the orthostatic or "functional" albuminuria often found in young adolescents. Curiously enough, his argument is in the opposite direction. He concludes that the conditions of life at the front, especially of life in the trenches, produce a hypersensitiveness of the kidney predisposing to nephritis. He regards fatigue as the principal factor which produces toxins that injure the renal filter and excite this latent albuminuria. Various infections, often of quite a mild character, aided by cold, act on the kidney as the point of least resistance and produce an explosion of acute nephritis, to which the name of war or trench nephritis may be given. He maintains that it is not a new entity, but the classical acute nephritis, which has become more

[1] Arch. Médicales Belges, November, 1917.
[2] THE LANCET, 1916, ii., 488.

frequent among soldiers, and that trench life predisposes to other forms of nephritis besides the acute type. He urges the importance of examining the urine of all soldiers who complain of fatigue, difficulty in walking, and of lumbar pain after marching, and of giving all troops proper periods of real rest. Dr. Moret makes a point against the theory of a specific infection when he shows that a number of infective organisms, often of low virulence, have been held responsible by various observers. He regards these as merely producing their effect on a kidney with its resistance already lowered and the subject of latent albuminuria. But in that case not only should we expect more correspondence between the incidence of latent albuminuria and of acute nephritis in the different armies, but we should anticipate that as the strain of war continued nephritis would become more frequent. Fortunately this does not appear to be the case. It must be admitted that so far no satisfactory explanation has been given of the frequency of acute nephritis in this war as compared with all others except the American Civil War. The third annual report of the Medical Research Committee, which has just been issued, is not able to carry our knowledge of the etiology of war nephritis any further yet, although it is gratifying to know that researches are still actively in progress.

INFANT MORTALITY IN INDIA.

THE question of infant mortality occupies a prominent place in the annual report of the Sanitary Commissioner of the United Provinces recently published. The actual number of infant deaths during the year was 423.130, which is equivalent to 209 per mille of the births. The greatest mortality in the United Provinces was attributed to tetanus, occurring as the result of uncleanly midwifery. In most of the districts over 50 per cent. of the infantile mortality was set down to this cause. It is evident, however, that the figures cannot be relied on, and the health officers of the leading municipalities have been instructed to inquire into the age of each child reported to have died of tetanus, and also to make a personal diagnosis. By this means it is expected that the real significance of tetanus as a cause of infant mortality will have been ascertained by the close of the current year. It is impossible to contemplate the great problem of infant mortality in India in its widest aspects without appreciating the tragedy which it presents, or realising how much educated Indians might do to reduce the evil by pointing out to their less-favoured fellow countrymen the results that must inevitably follow violation of the laws of health.

MALARIA PROBLEMS.

A QUESTION which has lately caused some anxiety is whether malaria will again become endemic. If we really understood why it had disappeared from this country we might be in a position to answer the question, but the explanations so far given of the disappearance of malaria are partial and therefore unsatisfactory. A recent number of the *Paris Médical* (No. 44, Nov. 3rd, 1917) deals with this and other aspects of malaria. It is hopeful to be informed that in three years only 100 autochthonous cases have been noted in France and none in the Marseilles district, where there is much imported malaria, and, of course, anophelines. It seems as if there were still some influence unknown, the "regional factor" of Stephens and Christophers. Much has been written by our French colleagues as to the differential symptoms of primary and secondary malaria, but we do not believe it possible to tell whether a patient's attack is the first or the fiftieth. These terms have often been employed loosely, the definition here given being: primary malaria is infection with malignant tertian parasites, secondary malaria with simple tertian. But does malignant tertian change to simple tertian? There are no facts that we know of which show that a malignant tertian infection of West Africa becomes a simple tertian later. It certainly does not in West Africa itself, because there simple tertian is rare, malignant tertian universal, nor have we seen a malignant tertian from West Africa change to a simple tertian in this country. That the Macedonian cases did so change in November, 1916, is well known to microscopists, but the explanation may be that the patients were doubly infected at the start. This question of the unity of the species of malaria parasites could probably be settled by the observations of West African cases in this country. Will the war statistics on malaria give the *coup de grâce* to the special parasite theory of blackwater fever? We should have expected, with a writer in the *Paris Médical*, this hypothetical parasite to have become epidemic in its manifestations in Macedonia, but we believe it has not done so. Cases of blackwater fever have been observed so far only among malarias, not in dysenteries, paratyphoids, cholera, or any other condition. Concerning the mode of administration of quinine much has been learned during the last few years, but Mr. Stephen Fox's letter in our correspondence columns shows that finality has not yet been reached. Prophylactic treatment is not discussed in the French journal. So far as we know there is no experience in this war to draw upon. What an opportunity for a great experiment, and one if it had been successful that would have resulted in the saving of life, money, and time, and, if unsuccessful, at least of quinine! It is only by the method of controls not taking quinine that the value or want of value of any prophylactic dose can be determined. We believe the evidence points to the conclusion that the 5-grain or even 10-grain dose daily is useless as a prophylactic. Paroxysmal treatment, under normal conditions, presents no great difficulties and is usually successful, but we learn that in Macedonia failure has not been uncommon. We would note in passing that the dilution of the dose used for subcutaneous injection—viz., 2·8 grammes of quinine-urethane in 30 c.c. of saline—is unnecessarily bulky, and so for the intravenous injection 2·8 grammes in 500 c.c. Experience has shown that simple tertian parasites are difficult to eradicate from the body. The ordinary paroxysmal treatment—oral, intramuscular, or intravenous—which as such is usually so successful, does not in the doses ordinarily used effect a real cure—i.e., an eradication of parasites from the body. Hence the necessity for post-paroxysmal treatment with that object in view. What is the best method of obtaining this end? This, as recognised in these papers, can only be ascertained by observations on a considerable number of cases. The following methods are discussed:—1. A common procedure, viz., grains 10 to grains 20 daily, for considerable periods, is not a good method, for as many as 30 per cent. may relapse at any particular time while following this mode of treatment.

2. Grains 30 on three consecutive days each week is much better, for it keeps the relapses down to 5 per cent. 3. Treatment of relapses only—grains 30 during the attack and for two days more if necessary until the temperature falls—is a method which also keeps the relapses down to about 5 per cent. It has the merit, like the second mode of treatment, that it is an interrupted one, and the additional merit that quinine is not given unless it is actually necessary. The drawback to all these methods is that they probably are no more curative (in a month) than the original paroxysmal treatment. With the lapse of time, no doubt many of them will be curative, but a post-paroxysmal treatment is required which, while it is as such efficacious, will at the same time give a good chance of cure within a month or less. From this point of view we believe that these treatments will be found unsatisfactory. Neo-salvarsan treatment is recorded, but the cases are too few to enable us to estimate its value as a curative drug. Finality has not yet been reached in our knowledge of how to administer quinine in order to obtain a permanent cure, if such can be obtained by its use, and if it is not Nature that effects it.

THE CARE OF THE BLIND.

THE Departmental Committee of the Local Government Board on the Welfare of the Blind has recently issued its report (Cd. 8655). Mr. W. Hayes Fisher, President of the Board, has now appointed a committee of ladies and gentlemen to advise the Department on matters relating to the care and supervision of the blind. Most of the members have had great experience in dealing with the education and after-care of blind people, and the selection appears to have been made with discretion. There is, however, one serious omission: there is no medical man or ophthalmic surgeon upon the committee. The Departmental Committee had an ophthalmic surgeon among its number, as well as two other medical men. They invited the Royal Society of Medicine to give them help in their deliberations, and a subcommittee of the Ophthalmological Section devoted much time and trouble to the subject. Mr. Hayes Fisher, writing to the *Times* of Dec. 11th, excuses himself for the absence of any medical representative on the Advisory Committee by saying that "nine-tenths of the committee's time will be taken up with the consideration of administrative problems," and that "under existing circumstances it would not be right to make a further demand upon the time of any of our eminent ophthalmic specialists, who are already so fully occupied." In the ordinary affairs of civil life it would not be thought courteous to obtain the gratuitous advice of experts and then proceed to put their recommendations into action without inviting their coöperation. "Under existing circumstances" there may still be some of the older ophthalmic surgeons whose offers to the War Office have not been accepted and who are sufficiently free to undertake other duties. At any rate, they are themselves the best judges of the time which they have at their disposal, and it is regrettable that the Advisory Committee will be deprived of their assistance.

MEDICAL INSURANCE AGENCY.

A MEETING of the Committee of the Medical Insurance Agency was held at 429, Strand, W.C., on Nov. 22nd, when the chairman, Dr. G. E. Haslip, made a statement with reference to the work of the agency from May to November, which showed that the amount of business transacted continued satisfactory, in spite of difficulties owing to unsettled conditions as a result of the war. On the whole, it appeared from his statement, the bulk of business has been maintained in every section. Motor business continues to grow, in spite of the shortage of petrol and the number of men away on military service. The agency also hold many cars covered against the fire risk only during the absence of the owners, and on their return it is not unreasonable to anticipate considerable extension of business. In the meantime the amount of premium received for the fire risk is less than for full risks, which naturally influences the amount received for commission. A satisfactory feature continues to be the amount of life business placed, without restriction to any particular office, but in accordance with the special circumstances of each case. A distribution of surplus profits being again possible this year, the Committee resolved that a further sum of £500 should be voted for medical benevolent purposes, making a total distribution of £1000 during 1917, as compared with £705 in the previous year. The £500 were allocated as follows: Royal Medical Benevolent Fund, £100; Royal Medical Benevolent Fund Guild, £100; Epsom College Benevolent Fund, £50; Royal Medical Benevolent Fund Society of Ireland, £40; War Emergency Fund (Royal Medical Benevolent Fund), £210. As a result of this distribution the total sums allocated to medical charities have reached £3405. The votes at the disposal of the Committee for St. Anne's School, in return for grants made, have been given to the daughter of a medical practitioner.

THE library and offices of the Royal Society of Medicine will be closed on Christmas Eve, Christmas Day, and Boxing Day—i.e., Dec. 24th, 25th, and 26th.

Major Sir Filippo de Filippi, K.C.I.E., will deliver a lecture, illustrated by lantern slides, on "The Sanitary Services of the Italian Army," at University College, London (Gower-street, W.C.), on Tuesday next, Dec. 18th, at 5.15 P.M. The chair will be taken by the Vice-Chancellor of the University. The lecture is open to all without fee or ticket.

THE LANCET, VOL. II., 1917: THE INDEX.

THE Index and Title-page to the volume of THE LANCET completed with the issue of Dec. 29th will be ready early in the New Year. Owing to the increasing shortage in the paper-supply, the Index will not be issued with all copies of THE LANCET, as was the custom prior to the War. Subscribers who bind up their numbers are requested to send a post-card to the Manager, THE LANCET Office, 423, Strand, London, W.C. 2, when a copy of the Index and Title-page will be supplied free of charge.

SANITARY CONFERENCE AT KARACHI.—A sanitary conference was held in Karachi recently. The conference took the form of a series of popular demonstrations on sanitary matters by means of lectures, illustrated by magic-lantern slides and cinematograph films. The lecturers were recognised authorities on the subjects with which they dealt, which included malaria, tuberculosis, cholera, rats and fleas in relation to plague, and methods of rat destruction, yellow fever, public health, functions of a municipality, &c. The conference was held under the auspices of the municipality of Karachi.

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

A MEETING of the Committee was held at the offices of THE LANCET on Monday, Dec. 10th, Sir RICKMAN GODLEE in the chair.

A letter was read from the medical officer of health of Milford Haven, referring to the need or otherwise of the Belgian workers at that port being attended by a medical man of their own nationality. The medical officer explained that the Belgian community was smaller than it had been, and was being attended by the local medical practitioners so that the help of a Belgian practitioner was no longer required.

Dr. DES VŒUX submitted a financial statement which showed the present position of the Fund to be as follows:—

Belgian Doctors' and Pharmacists' Relief Fund.

TREASURER'S CASH ACCOUNT. 1ST JULY TO 30TH NOV., 1917.

1917.							
1st July.	To Balance...	£5477	13	4	By Relief	£4012	0 0
	,, Interest...	34	0	7	,, Clothes	10	10 0
					,, Administration expenses	2	6
					,, Balance Cash at Bank...	1489	1 5
		£5511	13	11		£5511	13 11

We have examined the above account with the books and vouchers of the Fund, and certify it to be correct according to the books. In our opinion the receipts and payments have been fully recorded, and we have compared the receipts with the published acknowledgments and have had produced to us certificates as to the correctness of the balance as shown. CREWDSON, YOUATT, AND HOWARD, Chartered Accountants, Auditors.

70*a*, Basinghall-street, London, E.C. 2, 5th Dec., 1917.

This pecuniary position corresponded with the estimate of the Committee, earlier in the year, that the funds in hand would enable a mensuality of £800 to be sent during 1917 to Belgium, but that the end of the year would see the practical exhaustion of the Fund. It was decided that £700 should be sent for the month of December, and that the amount available for January should later be fixed. Dr. Des Vœux also announced that temporarily the clothes department had been shut up, the premises having been taken over by Government, but that he had found a lady willing to supervise its continuance when the necessary accommodation was available. For the moment the clothes have been stored.

The Committee debated the future prospects of the Fund, having regard to the fact that the sum remaining at their disposal would be exhausted by the mensualities of December and January, and came to the unanimous conclusion that an attempt should be made, despite all the attendant difficulties, to raise more money. A letter from Mr. W. B. Poland, Director for Europe of the Commission for Relief in Belgium, who until the outbreak of hostilities between Germany and America had been resident in Belgium, was read, which described in moving terms alike the terrible [illegible] of the Belgian middle-class population and [illegible] the unbounded gratitude of the medical and pharmaceutical professions for the assistance which had been afforded them by their British colleagues. In the face of such a letter the Committee found it a paramount duty upon them to proceed with the difficult task of raising further money, and it was decided that steps should be immediately taken to this end. It was arranged that a letter signed by the Committee and placing the situation before the medical and pharmaceutical professions should be published in early issues of the medical and pharmaceutical press, and that Mr. Poland's communication, alluded to above, should also be published in the same journals and circulated widely in other quarters.

BELFAST MEDICAL STUDENTS' ASSOCIATION.—On Friday, Dec. 7th, at Queen's University, Belfast, Dr. S. Turkington, President of the Medical Students' Association, having delivered his opening address dealing with the progress of medicine, Professor J. Lindsay gave a lecture on the prospects before the medical student, which he described as bright for all. In replying to a vote of thanks, Dr. Lindsay said the scheme recently adumbrated of free medical treatment for everyone would be a difficult one. It would come up against specialism and medical research, and would tend to a dead level of mediocrity.

MEDICAL RESEARCH COMMITTEE.

THE THIRD ANNUAL REPORT.[1]

WE dealt last week with some of the more general aspects of the work of the Medical Research Committee, and now pass on to consider in detail certain departments of it.

The Central Institute and its Departments.

The Mount Vernon building used until August last for the study and treatment of military cases of heart disorder is now to be employed for the care of the special disabilities incident on flying, the heart cases having been transferred to larger accommodation at Colchester.

Department of Bacteriology.—The department has continued to turn out work of the first interest. The diminished alkalinity of the blood shown to be present in cases of gas gangrene has led to successful treatment of these cases by the infusion of alkaline solutions. Further work on the emigration of white blood cells and their place in the general physiology of wound healing has been done. The classification of cases of war nephritis has been advanced a stage, and investigations made into the best methods of skin-grafting, into the various types of *B. dysenteriæ* Flexner, and into the bactericidal and tissue-destroying effects of certain groups of antiseptic substances. The special beds at St. Mary's Hospital set apart for research in connexion with the Department have had to be abandoned owing to shortness of staff.

Department of Biochemistry and Pharmacology.—An investigation into the action in experimental dysentery of the alkaloids of ipecacuanha has had practical results, as well as another into the effect on amœbic infection of the Mexican bitter-bush, *Castela nicholsoni*. Work on the nature of shock-like conditions and on the properties and commercial preparation of the flavine antiseptics has occupied much attention. In addition, confidential inquiries of various kinds have been carried out for Government departments. One member of the staff has inquired experimentally into the physiological actions of alcohol for the Central Control Board, and the department has benefited by the help of Dr. A. N. Richards, professor of pharmacology at Philadelphia University.

Department of Applied Physiology.—This department has been decentralised and made partly perambulatory to meet special needs, relinquishing its rooms at the London Hospital Medical College. Pressing work has been done on the composition of workers' dietaries and on economical methods of cooking foodstuffs. The principles of ventilation have been further investigated by the cata-thermometer and the emission of radiant heat from the human skin accurately measured. Synthetic biochemical processes, especially in relation to the conversion of the energy of light into chemical energy, have been further studied, as well as the physiological problems of flying at high altitudes.

Statistical Department.—In addition to the great task of preparing medical statistics of the war, the epidemiology of phthisis has been studied with the provisional conclusion that two allied organisms are concerned, one affecting early adult and the other middle life, each with a distinct geographical distribution. Infant mortality, the periodicity of measles epidemics, and the span of human life, as illustrated in the contributions to the "Dictionary of National Biography," have also been subjects of inquiry.

Department of Clinical Research.—This will now be concerned both with the military cases of heart disorder at Colchester as well as with the disabilities due to flying at Mount Vernon.

Army Medical Statistics.

Work in this field has grown to enormous proportions, demanding a clerical staff of 103 persons. Since Jan. 1st, 1917, the War Office has provided the salaries of typists and sorting clerks while the Research Committee has supplied the staff itself and other resources. The records will form the statistical basis of the medical history of the war and, in addition, a source of essential facts for the prompt settlement of all claims for pensions and allowances. This fact in itself entitles to a grant of public money. The records have already been used in tracing the after-history of large groups of cases of gas-poisoning, nephritis, gunshot wounds of the chest, and aneurysm. A military officer of high standing has been appointed to represent the Committee in France, with the result that a general system of records has been evolved with complete success. In place of the case-sheet the Army field medical card has been altered to form a continuous diary of each casualty's clinical history while overseas, which returns with him to the United Kingdom for the information of any medical officer into whose hands he comes. This card is the same size as the Research

[1] To be obtained through H.M. Stationery Office. Price 6d.

Committee's index cards and can be filed with them. Note-taking forms and blank diagrams have been supplied by the million, enabling special records to be kept of special subjects such as abdominal surgery, head and chest wounds, fractures of bones, and injuries to joints. A pathological artist has been engaged to assist the verbal descriptions of important injuries. Mobile laboratories for bacteriological or chemical work have been further extended and opportunities afforded of throwing light on problems of military and medical importance—e.g., in the study of changes in the circulation after severe wounds and operations.

Decentralised Work.

The report considers in detail a number of headings under which special research work has been aided at civil and military hospitals and ambulances. Some of these are: the disinfection of drinking-water, the chemistry of bacterial growth, typhoid and paratyphoid infections, dysentery, cerebro-spinal fever, spirochætal jaundice, trench nephritis, the medical problems of flying. These summaries include a large part of the most important work of the Committee and work which gives great promise for the future, but they do not lend themselves to further abstraction, and this is the less necessary as many of the results recorded have been published in our columns during the last 12 months. The report concludes with an acknowledgment of the valued help and coöperation of the United States of America. On behalf of the National Research Council at Washington, Dr. H. D. Dakin gave to the Committee valuable service in France and the Mediterranean, and after his return to New York is still serving as a personal link between the two organisations. The Rockefeller Institute for Medical Research, in the person of its director, Dr. Simon Flexner, has also reciprocated, and Professor W. B. Cannon, of Harvard, and Professor Tilestone, of Yale, are in this country collaborating with the British staff. This growing coöperation for the advancement of medical knowledge between the English speaking countries is a fortunate event, and one fraught with great promise.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Inter-Allied Surgical Congress.

AT the third Inter-Allied Surgical Congress, which sat from Nov. 3rd to 8th at the Military Section of the Val-de-Grâce, under the presidency of M. Justin Godart, Under Secretary of State for the Service de Santé, *six questions* were raised on which numerous conclusions were based, some of them of great importance. With regard to the *first*—secondary and delayed complications of wounds of the brain—surgeons agreed that delayed infection of such wounds is much rarer than was commonly supposed; that organic disturbances following wounds of the brain, e.g., hemiplegia, monoplegia, aphasia, visual disturbances, frequently have a tendency to spontaneous improvement; and that epilepsy, if amenable to surgical intervention when a foreign body or splinters of bone are present, is not so in other cases. In cases of cerebral hernia lumbar puncture should be avoided during the acute febrile phase in order to avoid the possible dissemination of a local infection. Foreign bodies tolerated by the brain may be left. Cranioplasty is only indicated in cases where the extension of the cicatrix is the sole cause for the symptoms observed, except in the frontal region for æsthetic purposes. The *second* question dealt with the later results of treatment in the case of fracture of the shaft of the femur. It has long been generally recognised that results are only middling as regards the extent of the lesions, the insufficiency of reduction and of its maintenance, and especially as to infection of the focus. A primary sterilisation of the wound is the chief factor to realise. Stiffness of the joints of the knee, hip, and foot can be avoided by early movement. Adherence of muscles to callus is the origin of many disturbances of function necessitating freeing by surgical methods. Strongly marked deviation is amenable to ostectomy with resection of the callus if there is osteomyelitis. The *third* question referred to operation for injuries to nerves. The Congress admitted that the ultimate results are generally middling, especially in the case of total lesions, and when the operation takes place among suppurating tissues. Primary suture of a nerve in a *milieu* rendered aseptic by modern methods has given better results. Functional recuperation is slow, occupying months or even years, a fact which must be taken into consideration in working out compensation. The treatment of fracture of the joints (*fourth* question) has made great progress since primary sterilisation has been the object aimed at, and operative measures initiated within 10–12 hours. Comminution of the epiphysis is to be treated by gouging out and cleansing followed by immediate suture of the joint. Early resection is only indicated in exceptional cases where severe comminution is present. Primary amputation is limited to cases of extreme contusion with destruction of the principal artery. Immediate active movement gives better results than immobilisation. The *fifth* question deals with the treatment of chronic osteomyelitis, which should be mainly preventive and completed either by immediate closure of the wound after removal of all sequestra or by chemical sterilisation with secondary autoplasty. With regard to thoraco-abdominal wounds (*sixth* question), the Congress gave special attention to wounds of the diaphragm. Radioscopic examination is necessary to recognise hernia of the abdominal organs and determine the displacement of the heart. Operation is nearly always indicated, and a transpleural route by way of the thorax is generally to be preferred, associated with laparotomy when desirable.

Frostbite as a Factor in the Development of Tetanus.

Inspector-General Vincent, professor at the military department of the Val-de-Grâce, discusses in a note to the Academy of Medicine the favourable action exerted by cold and frost-bite upon the development of tetanus. The fact has long been recognised by French military surgeons; Larrey showed after the battles of Prague, Lützen, and Bautzen that exposure to severe cold at night was followed by an abundant crop of tetanus among the wounded men brought in. Before the war Dr. Vincent showed by experiment that tetanus might appear several months after the entrance of the germ when the infected part was placed in ice. More recently he established the fact in guinea-pigs that local, even more than general, humid cold is a condition favourable to the rapid development of tetanus. He observed the division of tetanus bacilli taking place in the infected limb two hours after being held under a continuous jet of cold water. Tetanic symptoms appear after a very brief incubation and rapidly kill the guinea-pig, sometimes with splanchnic phenomena. Similar conditions—low air temperature, maceration by water, reduction of temperature of the limb itself, œdema, trophic disturbances in the foot—are present in the trenches in winter. The sowing of the bacillus is effected by means of pre-existent erosions, or excoriations, or by ulceration due to frost-bite itself. At a temperature of 15° C. or below Dr. Vincent has shown that the leucocytes lose their property of taking up tetanus spores, while the dropsical fluid which infiltrates the cellular tissue of the foot and leg forms a perfect nutritive medium for the anaerobe to store up its toxin. Subsequent absorption of the fluid is then the equivalent of an injection of tetano-toxin. For this reason symptoms appear early in acute cases and may outlast the period of passive immunity brought about by injections of serum. Duration of immunity from a single injection does not, in fact, exceed 10–12 days—it is occasionally less—and can only be preserved by repeated injection. The protection afforded by antitetanus serum-therapy has reduced the incidence of tetanus as an infectious complication of wounds in general, but it still occurs under the conditions named in fulminant form in spite of prophylactic injection, as M. Bacri and M. Chavasse have reported. A certain number of their cases had received one, two, or three injections of serum over a period of 10 or 12 days, some receiving large doses. Seventeen patients who received three injections died, the majority of acute tetanus. The occurrence of splanchnic tetanus was noted in three cases.

The Control of Secret Remedies.

The Academy of Medicine has been occupied for some weeks past in discussing the terms of their reply to a question proposed by the Minister of the Interior on the subject of the control of the sale of secret remedies. The situation is completely abnormal in France and has long required definite control. In theory the offer for sale of remedies of unknown composition is strictly forbidden by the law of April 11th, 1803 those who sell or advertise such remedies being liable to prosecution. For many years, however, the

courts have not enforced this law, though it has never actually been repealed. The number of secret remedies now exposed for sale is said to amount to 40,000 or more. The solution of the question is not easy at the present time, for if, on the one hand, medical men are in general hostile to the offering of pharmaceutical specialities to the public without medical prescription on the grounds of the grave danger to the public health and the prejudice to legitimate medical practice, on the other hand the sale of patent medicines represents a huge industry, not only in France itself but also for export, and the gain to the revenue from the taxes imposed cannot be neglected. Manufacturers of secret remedies naturally have considerable financial influence, and by publications in the general and medical press they add largely to the publishers' profits, making it difficult or impossible for adverse medical opinion to be circulated. These difficulties find an echo in the debates of the Academy. M. Galippe maintained the legitimacy of pharmaceutical specialities and the necessity of avoiding damage to the large commercial interests which are only protected by the secrecy of the composition of their products. M. Léger, spokesman of the committee appointed by the Academy to study the question, concluded in favour of a compromise. The sale of pharmaceutical specialities should be authorised only after examination by a special committee of the Academy, the exact formula being deposited with the Academy, the School of Pharmacy, and the Council of Hygiene. M. Bourquelot, professor at the School of Pharmacy, demands, on the other hand, the reinforcement of the prohibition of the law of 1803. He suggests that preparations of genuine interest have nothing to fear from the publication of their formulas, still less the special brands of products of definite chemical composition, alkaloid or other, the purity of which can only be obtained by manufacture on a large scale, and is vouched for by the name of the firm. Publication of the composition could only damage spurious commodities sold to the public without medical recommendation on specious advertisement. M. Bourquelot supplies a powerful argument in support of his view when he points out that, though the law is not enforced in France in connexion with specialities of home manufacture, it is applied in the case of imported foreign products, no secret remedy being admitted by the French Customs officials. If the sale of secret remedies were now legalised it would be impossible to continue the prohibition of foreign specialities. Many foreign countries which prohibit the import of secret remedies, and therefore only admit French preparations which give the formula on the label, nevertheless offer a ready market for some of them. The discussion is not yet closed, but it is quite probable that the Academy will pronounce in favour of protecting genuine remedies, while the prohibiting the sale of those whose spurious composition requires the suppression of the formula.

URBAN VITAL STATISTICS.

(Week ended Dec. 8th, 1917.)

English and Welsh Towns.—In the 96 English and Welsh towns, with an aggregate civil population estimated at nearly 17,000 000 persons, the annual rate of mortality was equal to 12·4, against 12·3 and 11·9 per 1000 in the two preceding weeks. In London, with a population exceeding 4,000,000 persons, the death-rate was 13·1, or 1·1 per 1000 above that recorded in the previous week; among the remaining towns the rates ranged from 5·2 in Enfield, 6·1 in Coventry, and 6·2 in West Bromwich, to 18·8 in Hastings 19·8 in Rotherham, and 20·4 in Brighton. The principal epidemic diseases caused 280 deaths, which corresponded to an annual rate of 0·9 per 1000, and included 103 from measles, 60 from diphtheria, 58 from whooping-cough, 36 from infantile diarrhœa, 11 from scarlet fever, and 7 from enteric fever. Measles caused a death-rate of 2·7 in Acton, 2·9 in Leicester and in Bury, 3·2 in Brighton, and 6·0 in Dewsbury. The 1351 cases of scarlet fever and 1635 of diphtheria under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital were respectively 7 above and 32 below the numbers remaining at the end of the previous week. Of the deaths from all causes in the 96 towns, 156 resulted from violence. The causes of 33 deaths were uncertified, of which 6 were registered in Birmingham, 5 in Liverpool, and 2 each in Dudley, Warrington, Manchester, and Barrow-in-Furness.

Scotch Towns.—In the 16 largest Scotch towns, with an aggregate population estimated at nearly 2,500,000 persons, the annual rate of mortality was 12·9 against 12·2 and 12·5 per 1000 in the two preceding weeks. The 296 deaths in Glasgow corresponded to an annual rate of 13·8 per 1000, and included 7 each from whooping-cough and infantile diarrhœa, 5 from diphtheria, 3 from measles, and 1 from enteric fever. The 62 deaths in Edinburgh were equal to a rate of 9·7 per 1000, and included 2 from infantile diarrhœa.

Irish Towns.—The 141 deaths in Dublin corresponded to an annual rate of 18·4 or 2·8 per 1000 above that recorded in the previous week, and included 3 each from measles and whooping-cough, and 1 each from diphtheria and infantile diarrhœa. The 103 deaths in Belfast were equal to a rate of 13·7 per 1000, and included 2 each from enteric fever, measles, and whooping-cough, and 1 from infantile diarrhœa.

Correspondence.

"Audi alteram partem."

INTRAMUSCULAR INJECTIONS OF QUININE BIHYDROCHLORIDE IN SIMPLE TERTIAN MALARIA.

To the Editor of THE LANCET.

SIR,—In the *Annals of Tropical Medicine and Parasitology* (June 30th) issued by the Liverpool School of Tropical Medicine, in an article under this title Sir Ronald Ross is quoted as having written as follows:—

"I really do not know why this form of medication is continued in malaria. It appears to me that the only cases in which intramuscular injection is called for are those in which intestinal absorption may be checked by very marked intestinal affections, or where patients are not to be persuaded to take the drug by mouth at all. For severe cases, to judge by experimental evidence, the subcutaneous injections are worse than useless."

It is with great diffidence that I venture to disagree with such a master of tropical medicine as Sir Ronald Ross, but the experience of many years' treatment of malarial fever in one of the Federated Malay States (Perak) is very much in favour of the intramuscular injection of quinine. This fact in the treatment of the more obstinate forms of malarial fever is recognised by all medical officers practising in this part of the world. It is obvious that no one would exchange such a simple way of giving quinine as per os for a method which involves the boiling of the syringe, the solution, the sterilising of the patient's skin, and the discomfort inflicted unless there was good reason for it. Patients, especially Europeans, have confidence in the intramuscular method and constantly of their own accord ask for it, as they have been taking quinine by the mouth in 10 to 15 grain doses daily with no good results. The hospital returns show that the prevailing type of malarial fever in Perak is subtertian. In 1916 in the various Perak Government hospitals the microscopical examination of the blood gave the following admissions for malarial fever: Benign tertian, 1098; quartan, 202; subtertian, 4992; mixed infection, 198; type undiagnosed, 3370 (most of these cases had been taking quinine before admission, and no parasites were to be found in the peripheral blood). There were 599 deaths from the different types of malaria. The above figures do not include the many estate hospitals existing in Perak.

The hospital routine treatment of malarial fever is as follows:—

On admission to hospital, if subtertian parasites are found, gr. x. of quinine bihydrochloride in 12 mins. of water is given intramuscularly twice a day, until the pyrexia is controlled, generally in two or three days, when the injections are stopped, and 30 grains a day given by the mouth for 14 days. Often the two methods are combined, but the trouble is to get a patient to remain in hospital after his temperature has been normal for one week. If he insists on leaving he is instructed to take quinine 20 grains for two weeks and then 10 grains for at least three months, but whether he follows this advice is extremely doubtful. Relapses are, I regret to say, frequent, but this is probably due to reinfection (as parasites have again been found in the peripheral blood) as much as to inefficient treatment by quinine.

The recent excellent article, the Diagnosis and Treatment of Malaria, by Captain David Thomson, published in the *Journal of the Royal Army Medical Corps*, wherein he recommends 30 grains of the bromide of quinine for three weeks, is more or less followed by us, but I have grave doubts whether our patients will be able to stand the 30-grain doses for so long as three weeks, as well as his did in Liverpool. Malarial gastritis is a frequent complication in our fever-stricken patients. In the treatment of benign tertian 30 grains per diem by the mouth of the bihydrochloride for two weeks is the only form of treatment followed; it is found that quinine so given is sufficient to control the fever, but notwithstanding the continuous treatment afterwards by big doses, 15–20 grains, for months, our experience that relapses in this type of fever are extremely frequent, more so than in any other form. In fact, I look on benign tertian as the most obstinate of relapsing malarial fevers. The intravenous injection of quinine is reserved

for big subtertian infections with brain complications. In children and infants suffering from malarial convulsions quinine per rectum has been found satisfactory. Such is the treatment of the malarial fevers in Perak. A drug, however, is urgently needed to stop the relapses: galyl + quinine is now on trial, but too short a time has elapsed or too few cases treated for any opinion to be yet formed.

We all out here look up to the intramuscular injection of quinine as our sheet-anchor in all obstinate and chronic forms of malarial fever, and generally find we have not placed our trust in vain. With careful asepsis no bad results have generally been observed. Occasionally an abscess has developed at the site of injection, but this has been due to faulty technique and sometimes to the low vitality of the tissues. In a small hospital in Taiping with 60 beds for Europeans, Eurasians, and the better-class Asiatics, 672 intramuscular injections of quinine were given during the last 12 months; abscess formation 4, tetanus nil. The quinine is injected into the gluteal region about 1 inch below the crest of the ilium, and is always given by a European sister or by the medical officer himself. The patient's name is entered into a special book, and the operator signs his or her name and is made responsible for any bad results. Figures for the other hospitals have not been obtained. How the intramuscular injection of quinine acts I am not prepared to state; perhaps it is due to a slow, continuous absorption of the salt or to an attack in the rear, the quinine getting into the blood current of the spleen and bone marrow easier from this direction. But in whatever way the results are obtained, until some other better method or drug is suggested or discovered the intramuscular treatment of malaria by the rank and file of the profession in this State will certainly be continued.

The treatment of malarial fever by 30 grains daily for three weeks, as suggested by Captain David Thomson, is no doubt effective in a non malarious country; but whereas in the tropics reinfection is the rule, such happy results as he obtained in Liverpool cannot, I fear, be our lot. The obvious reply to this is to get rid of your mosquitoes—but that is another story.—I am, Sir, yours faithfully,

STEPHEN C. G. FOX, M.R.C.S., L.R.C.P. Lond.,
Senior Medical Officer, Perak, F.M.S. Government
Oct. 11th, 1917. Medical Service.

THE RETRACTION OF BLOOD CLOTS.

To the Editor of THE LANCET.

SIR,—When reading Captain W. d'Este Emery's interesting article on the Retraction of Blood Clots in your issue of Oct. 20th, I was surprised at the small percentage of serum yielded in many of his experiments, varying from 0 per cent. in large-diameter tubes to nearly 60 per cent. in 1 mm. tubes, his best—the 9 mm. tubing giving only 6·3 per cent. to 21·5 per cent. of serum. Later, however, with this same tubing and more suitable temperature conditions, he obtained 50 per cent. and 56·6 per cent. Captain Emery deduces that the narrow tubings of 1 mm. and 3 mm. give far better results than larger diameter tubes—and that conditions of temperature are also of great importance. With the latter conclusion I agree, but my own experience leads me to doubt the former.

In the course of the last two years I have prepared comparatively large quantitives of agglutinating serum for meningococcus from rabbits and have used several hundreds of these animals in making the sera in batches of about 150 c.c. at a time. The animals are bled to death through the carotid into large sterile test-tubes of 75-100 c.c. capacity and 38 mm. diameter, or more than double the diameter of Captain Emery's largest tubes. The blood is then incubated at 37° C. for one hour, the clot separated from the tube for about three-fourths of its circumference by a sterile wire, and after remaining at room temperature for 24 hours the serum is poured off. Previously to reading his paper I had not troubled to ascertain the proportion of serum to clot which I obtained, but I felt sure when reading it that I got larger quantities by my method than his deductions would suggest were possible. Major A. S. G. Bell, R.A.M.C. (late Fleet-Surgeon, R.N.), has recently assisted me in preparing this serum, and, in fact, at present is doing the major portion of this work; at the first opportunity, therefore, we weighed the clot and serum of a rabbit bled by this method and found that we had obtained about 76 per cent. serum and 24 per cent. clot. This result was sufficiently surprising, and we therefore measured a series of other bleedings with the following average results.

Twenty-two rabbits produced 672 c.c. of serum and 414 grammes of clot, or about 64·2 per cent. of serum and 35·8 per cent. clot by volume. It should be noted that these bloods were collected in the agar-lined tubes recommended by Dr. Gardner, and which tend, as Captain Emery shows, to prevent a maximum output of serum; nevertheless, the average percentage of serum from over a litre, in the aggregate, of blood is higher than the best figure Captain Emery gives. The 76 per cent. serum from the first rabbit was got from a plain tube without agar, and four rabbits were therefore bled into plain tubes, with the result that these five rabbits gave 188 c.c. serum and 104 grammes clot, or 66·7 per cent. and 33·3 per cent. respectively by volume. The total for 27 rabbits, therefore, is 64·7 per cent. serum and 35·3 per cent. clot.

Captain Emery does not say whether the percentage is by weight or volume, but I show it by volume, taking the specific gravity of clot as 1100. I noticed some time ago that the yields of serum from different rabbits varied considerably, and this I attributed to the known disproportion which exists between corpuscular and fluid contents of the same rabbit's blood at different periods—i.e., a variation in fluid percentage. We generally find a better yield of blood shortly after the morning meal, and accordingly try to kill our animals in the forenoon. Captain Emery used human blood which does not show this variation, and this may possibly account for the disparity in our experiences. One thing, at least, is certain, that to obtain large quantities of serum by using small tubes is impracticable, for in order to procure 100 c.c. of serum, using Captain Emery's figures, some 230 yards of 1 mm. tubing, or about 50 yards of 3 mm., would be required. Some other means of obtaining maximum yields must therefore be found, and the method we are now using seems to give satisfactory quantities.

I am, Sir, yours faithfully,

Central C.S.F. Laboratory, Caxton-street, S.W. Nov. 23rd, 1917. T. G. M. HINE, Major, R.A.M.C.

THE VALUE AND LIMITATIONS OF SANATORIUM TREATMENT.

To the Editor of THE LANCET.

SIR,—Of the many fallacies which beset the observer of tuberculosis statistics, not the least is the prevailing but inaccurate notion that sanatorium treatment is of itself a complete treatment of pulmonary tuberculosis and that ultimate mortality rates are an index to its value. It is true that the duration of life after treatment might afford a fair criterion of the efficacy of such part treatment, but mortality rates prove nothing about the results of residence in a sanatorium except that a short stay has not achieved the impossible. After all one does not estimate the value of a "preparatory" school training by the numbers of old boys who, say, 15 years later receive an honorary LL.D.

The reason of this fallacy is clear: most of the sanatorium results on which current tuberculosis traditions were based were originally obtained from isolated institutions, either private or endowed, in connexion with which preliminary treatment was rare and after-treatment unheard of. The cases might or might not be chosen from artisan populations, but at all events they were chosen without any definite relation to the numbers of consumptives in any one district, county, or country. Now what possible light can these figures shed on the mortality rates or duration of life rates for the consumptive working population as a whole? Speaking as a past member of the staff at Midhurst, I cannot see that the Midhurst results prove anything about tuberculosis except that in variously selected cases the results vary. The patients were chosen from different sections of society and from different parts of the country, the bacillary cases were more often advanced than early, and from one-third to one-half of the non-bacillary cases were at any rate arrested on admission if not negative. Yet figures from these and similar institutions are freely used to form the basis of deductions as to the value of the sanatorium for consumptive workers, of whose treatment it only forms a small part. Is it not time that such statements should give place to the reports of tuberculosis officers, whose schemes, either rural or urban, give a comprehensive

idea of the incidence, treatment, and after-results for any one county or city area?

Perhaps, therefore, I may be pardoned the rôle of showman in again drawing the attention of your readers to the results obtained at the Birmingham Tuberculosis Centre. An illustration:—

A consumptive in Birmingham is no sooner notified than he is called up for examination, classified, and if found sensitive is sent to one of the many sanatoria and hospitals set aside for early, moderately advanced, or late cases respectively. During his absence various preventive measures are taken and all suspects or contacts dealt with. On his return he may continue treatment at the centre for as long as 18 months to two years; later he may return to a sanatorium for shorter spells of treatment if necessary, in fact, from the time of his notification he is shepherded until his recovery or death. Yet although patients may be kept on the books for three, five, seven, or ten years, there is no lack of sanatorium beds in Birmingham, no long waiting list, and the results for *all* cases, both immediate and afterwards, are far more gratifying than those of any sanatoria or semi-detached schemes, whether for private or public patients, so far noted in Britain. To take one point only—i.e., "bacillary loss"—in the Birmingham Sanatorium set aside for early cases, 57 per cent. lost their bacilli during 1916, whilst during the same year of 555 *consulting* treatment at the centre after from six months to two years, 70 per cent. had lost their bacilli (as tested by sedimentation methods) and this in spite of a prolonged return to ordinary working and social life.

The fact is that with a certain type of bacillary case in artisan populations a relatively short stay in a sanatorium, with after-treatment at a dispensary, is all that is necessary to secure complete arrest. It is not suggested that this scheme is perfect; there is ample scope for modification and improvement, but the point I should like to insist on is that before dogmatising on the duration and results of treatment, before comparing the results in wealthy and artisan communities, and, above all, before considering whether sanatorium treatment "has utterly failed," or "partly failed," or succeeded, it would be well to ascertain whether, in fact, every county or large town has got a passable scheme, and, if not, to insist on the establishing of one. Five years afterwards the discussion on results might be reopened with profit.

I am, Sir, yours faithfully,

EDWARD G. GLOVER, M.D. Glasg.

Birmingham Municipal Sanatorium, Cheltenham, Nov. 23rd, 1917.

SIR RICHARD CROFT AND THE CASE OF THE PRINCESS CHARLOTTE.

To the Editor of THE LANCET.

SIR,—May I trespass a little further upon your space by stating how it was that Sir Richard Croft left Oxford without a degree? The explanation is given in the *Gentleman's Magazine*, vol. lxxxviii. Practising in the University city at that time was a well-known physician, Sir Charles Nourse. This gentleman had given notice of retiring. To succeed him Croft went to Oxford as Nourse's assistant. Soon after Croft's arrival, however, Nourse changed his mind and Croft returned to London.

I am, Sir, yours faithfully,

Holland Park-avenue, W., Dec. 9th, 1917. S. D. CLIPPINGDALE.

SUCCESS AND FAILURE IN THE TREATMENT OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—May I beg a few more lines of your space to answer, as shortly as I can, two questions which Dr. W. M. Crofton puts to me in his courteous reply to my letter in your last week's issue. Dr. Crofton asks, first, whether I think it possible by isolation to cut off entirely the sources of tuberculous infection. I do not. Leaving on one side the bovine sources of infection, I could only hope to diminish by partial isolation the number of sources of infection and thus help on the disappearance of tuberculosis, just as, we learn on the authority of Robert Koch[1] and Sir Arthur Newsholme,[2] was done in the case of leprosy in Norway. If tuberculosis continues to decline, as surely it must when happier times return, we may look forward to the isolation of a continually increasing proportion of dangerous cases, and consequently an effect which will grow year by year until it succeeds in stamping out the disease.

Dr. Crofton next asks whether I do not think his "proposal to supplement this measure by an attempt to produce by immunisation a normal resistance in everyone to the tubercle bacillus worthy of consideration and trial." Candidly, I do not. I have already given my reasons at length, and can only add that tuberculosis is not one of those diseases which confer any marked immunity, like so many others (hence its chronic course and bad prognosis when well established). We have received little encouragement from immunisation experiments in animals; and it is necessary that public effort should be concentrated on the one main thing and not be side-tracked by others of doubtful utility.

I am, Sir, yours faithfully,

Cambridge, Dec. 10th, 1917. LOUIS COBBETT.

[1] Nobel Lecture, THE LANCET, 1906, i. 1449.
[2] The Prevention of Tuberculosis, p. 285.

COLLOSOL COCAINE.

To the Editor of THE LANCET.

SIR,—In your issue of Dec. 1st appears an article under the above heading by Dr. G. Barger, Dr. H. H. Dale, and Miss F. M. Durham (from the Department of Biochemistry and Pharmacology, Medical Research Committee), referring to statements published in THE LANCET and the *British Medical Journal*, embodying reports on this preparation by Professor R. Tanner Hewlett, Professor W. J. Simpson, and Dr. John Eyre, who found marked absence of toxicity and duration of anæsthesia in the samples submitted to them by us.

Scientific controversy on the difference of findings between these authorities must be deferred, as space will hardly be available for it together with the serious matters affecting personal honour and confidence which arise from that article, containing as it does, statements of fact and insinuation and indication of procedure which concern not only the persons above-named but also everyone connected with the "makers." Important omissions of material circumstances render it still further misleading. Had the authors of the article—as might be gathered from absence of mention to the contrary—purchased or otherwise acquired in the market, standard samples of collosol cocaine, for examination, their procedure and conclusions (if accurate) might merit justification, but as they omit to disclose the fact that they used various samples obtained from us, under circumstances which I mention later, a false impression is induced. Such impression is cumulatively aggravated to serious import by five separate remarkable comments in the article.

Firstly, there is mention of "a trap in which experienced observers seem to have been caught." True, this is followed by the remark, "We wish to make it clear, however, that we have no reason whatever to doubt the bona fides of the manufacturers"; and Sir William Crookes and the other scientists connected with the Crookes Laboratories will doubtless appreciate this testimony to the integrity of "the manufacturers," even at the possible expense of their intelligence.

The hypothetical criticism appearing in the article as the inspiration of the authors concerning "the other collosol alkaloids" should be tested in the light of the fact that I informed Dr. Dale at the outset that only an infinitesimal portion of the quinine used was found to be recoverable from collosol quinine by laboratory tests, and had he not specifically declined to examine anything other than the cocaine preparation, I would have emphasised the information, already given to members of the medical profession, that collosol quinine has no effect upon the parasite of malaria. The effect produced by publication of the comment without reference to our disclaimer, is obvious.

In the next place, the three authors of the article are responsible for the extraordinary and wholly inaccurate statement that the manufacturers "have withdrawn collosol cocaine from their list on hearing from us of our conclusions." No such withdrawal has been made, nor do the clinical results warrant it, but in fact we had no opportunity of even seeing—let alone considering—those "conclusions," till they appeared in THE LANCET article in which this statement as to withdrawal is made, whilst no data have even yet been furnished us to lead to such a course, nor to refute the detailed tests and reports of Professor Hewlett, Professor Simpson, and Dr. Eyre. Further, this definite statement of withdrawal appears simultaneously with a letter from the secretary of the Medical Research Committee in the *British Medical Journal*, which indicates that he, at any rate, had reason to doubt its accuracy, from perusal of my letter to that journal of the previous week, and he more accurately states that Dr. Dale

"advised them in their own interest to withdraw this preparation from their list." Then follows the remark, "This communication was of a verbal and confidential nature," but no reason is assigned for breach of the confidence.

Again, since the authors admit testing *five* different samples, exhibiting different behaviour, it is apparent that no standardised preparation was being dealt with. Dr. Dale particularly requested me to provide him with samples from different batches (and these included one which gave no anæsthesia at all), in a letter in which he said, "Any information which you are able to give as to the method of preparation would be helpful and interesting, and information so furnished by you would be regarded as confidential." Little did we suspect that under such circumstances, without affording us any opportunity of seeing the reports and conclusions, Dr. Dale would adopt the remarkable course of submitting them without our cognisance to Dr. Eyre, whom we had professionally instructed to make the preliminary tests and reports, and with the result that Dr. Eyre writes me that from the evidence Dr. Dale has put before him he is satisfied that he has been misled.

Undoubtedly such would be the case when he read conclusion No. 3, which states: "The quantity of cocaine chemically recoverable from each of the same three samples was approximately 0·24 per cent. instead of 1 per cent. *as indicated*." The all-important fact that I not only indicated, but expressly informed Dr. Dale when giving him the samples, that only a portion of the cocaine was recoverable, and that the percentages named represented the amount of cocaine used in preparation, is withheld, with the effect that other members of the medical profession have interpreted that "conclusion," as did Dr. Eyre, with equally disastrous results. Its reasonable interpretation is that credit is due to the authors of the article for discovering that only 0·24 per cent. of the cocaine is recoverable in a preparation "indicated" as containing 1 per cent. of recoverable cocaine, either through ignorance or design, and the fact of my previous information to the contrary and the consequent discussion is suppressed. Very serious results have already ensued, and I have through your columns to seek an explanation from the authors of the article you published.

I am, Sir, yours faithfully,

LEWIS STROUD, M.A. Oxon.

The Crookes Laboratories, Dec. 10th, 1917.

THE SERVICES.

ROYAL NAVAL MEDICAL SERVICE.

F. G. Hunt to be temporary Surgeon.

ARMY MEDICAL SERVICE.

Lieut.-Col. A. W. N. Bowen, D.S.O., relinquishes the rank of temporary Colonel on re-posting.

Lieut.-Col. S. A. Archer to be temporary Colonel whilst employed as Assistant Director of Medical Services of a Division.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Col. A. R. Aldridge, C.S.I., C.M.G., relinquishes the acting rank of Colonel on re-posting.

Temp. Col. P. W. G. Sargent, D.S.O. (Lieutenant, R.A.M.C., T.F.), relinquishes the rank of temporary Colonel and to be temporary Lieutenant-Colonel on re-posting.

Major P. J. Marett relinquishes the rank of temporary Lieutenant-Colonel on re-posting, and to be acting Lieutenant-Colonel whilst in command of a Medical Unit.

Major Walter A. S. J. Graham is seconded for employment under the Ministry of National Service.

Temp. Major (acting Lieut.-Col.) R. Wilson, C.A.M.C., relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

Temp. Major R. D. Macnamara (Captain, R.A.M.C., T.F.) relinquishes his temporary commission on re-posting.

Temp. Capt. F. V. Woodbury, C.A.M.C., to be acting Major.

Temp. Capt. (acting Major) A. MacKay, C.A.M.C., relinquishes the acting rank of Major.

Temp. Hon. Capt. A. M. Westwater to be temporary honorary Major.

To be temporary Captains: Temp. Lieut. H. T. H. Butt, A. Ross, C.A.M.C., C. G. Monro, W. T. Smith, A. C. Falkiner, J. N. Glaister.

To be honorary Captains: G. K. Allan, late temporary Captain; C. H. Evers, late temporary Captain.

Temporary Lieutenants to be temporary Captains: C. J. C. Macquarie, M. J. Ahern, C. W. Forsyth, R. Stansfeld, J. H. Iles, E. A. D. Maconochie, T. J. Lloyd, G. N. Kirkwood, A. W. Brodribb, G. W. Bury, F. B. Macdonald, P. A. Creux, J. F. H. Stallman, T. Marron.

Temp. Hon. Lieut. W. F. Matthews, of St. John's Ambulance Brigade Hospital, to be temporary honorary Captain.

Temp. Capt. R. H. Lipsey, Canadian Army Dental Corps, reverts to the temporary rank of Lieutenant on attachment to the R.F.C.

To be temporary Lieutenants: F. C. Watson, R. J. MacMillan, A. S. Moorhead, F. Green, S. Spencer, C. Murphy, A. R. P. Scott, J. C. Johnson, G. C. Cossar, P. S. Clarke, F. J. Power, G. Ferguson, R. O'Connor, A. Bryans, H. S. Gatb, W. Crerar, H. Barber, F. Joyce, E. F. Lawson, M. J. O'Flynn, J. M. McCormack, A. G. Heron.

To be temporary honorary Lieutenants: G. H. V. Hunter, H. A. Haskell, C. S. Gilman.

Officers relinquishing their commissions: Temp. Majors: J. C. Briscoe, J. Kerr, W. A. Brend, J. F. Porter, T. M. Martin, F. L. Colbe. Temp. Hon. Major B. Crothers. The undermentioned on appointment under the Ministry of National Service: Temp. Col. J. Galloway, C.B. Temp. Majors: N. S. Manning, W. B. Edwards, A. G. Andrews. Temp. Capts.: H. Owen, J. J. Robb, W. R. Reith, H. Bates, E. L. Jenkins, H. P. Gaston, J. C. Fisher, J. D. C. White, W. G. Gilletley, J. Davies, T. W. E. Moreton. Temp. Lieuts.: C. Alison, W. Johnstone.

Temp. Capts.: J. E. Knox, R. I. Harris, A. R. Riddell, T. C. Routley, J. D. Wilkinson (on account of ill-health contracted on active service) T. J. Simpson, F. Hernaman-Johnson (on account of ill-health and is granted the honorary rank of Captain), C. A. Dupont (on account of ill-health contracted on active service), C. A. Keegan (on account of ill-health), E. T. Jones, J. R. Polson, W. W. Linington, J. B. Orr, D.S.O., M.C., D. E. Scott. Temp. Lieuts.: H. V. O'Shea, O. H. Woodcock, S. Y. Walsh, J. A. A. Boothy, M. J. Walsh, R. G. Griffin, J. G. Fleming, W. Brennan, A. W. K. Straton.

SPECIAL RESERVE OF OFFICERS.

W. B. Buer to be Lieutenant.

K. J. A. Gillanders, from Glasgow University Contingent O.T.C., to be Lieutenant.

TERRITORIAL FORCE.

Lieut.-Col. (Brevet-Col.) F. H. Westmacott is restored to the establishment.

Major T. A. Barron to be acting Lieutenant-Colonel whilst commanding a Field Ambulance.

Major (acting Lieut.-Col.) T. A. Barron relinquishes his temporary rank on ceasing to command a Field Ambulance.

Major (acting Lieut.-Col.) A. E. Hodder, D.S.O., relinquishes his acting rank on ceasing to command a Field Ambulance.

Major A. E. Hodder, D.S.O., to be acting Lieutenant-Colonel whilst commanding a Field Ambulance.

Major A. Milne-Thomson, C.M.G., is seconded whilst holding an appointment as Assistant Director of Medical Services, and to be temporary Colonel whilst so employed.

Major L. P. Demetriadi resigns his commission on account of ill-health contracted on active service, and is granted the honorary rank of Lieutenant-Colonel.

Major (temp. Lieut.-Col.) G. A. Troup relinquishes his temporary rank on ceasing to command a Field Ambulance.

Capt. L. A. Rowden, Capt. W. R. Higgins, Capt. R. F. Fagge, Capt. H. H. Markham, and Capt. M. D. Wood are restored to the establishment.

Capt. P. G. Phillips and Capt. C. R. Handfield-Jones resign their commissions on account of ill-health.

Capt. (temp. Major) R. S. Taylor, D.S.O., to be acting Lieutenant-Colonel whilst commanding a Field Ambulance.

Capt. H. F. Wilkin, M.C., to be acting Lieutenant-Colonel, whilst commanding a Field Ambulance.

Capt. (acting Lieut.-Col.) H. F. Wilkin, M.C., relinquishes his acting rank on ceasing to command a Field Ambulance.

Capt. (acting Lieut.-Col.) H. B. Low, M.C., relinquishes his acting rank on ceasing to command a Field Ambulance.

Capt. (temp. Major) A. C. H. McCullagh to be acting Lieutenant-Colonel whilst commanding a Field Ambulance.

Capt. (temp. Major) J. R. Pooler to be acting Lieutenant-Colonel whilst commanding a Field Ambulance.

Capt. J. P. H. Davies relinquishes his commission on account of ill-health, and is granted the honorary rank of Captain.

Capt. H. A. P. Robertson, from a Field Ambulance, to be Captain.

Capt. (temp. Major) R. R. Carling relinquishes his temporary rank, and is restored to the establishment.

Capt. P. W. Thompson resigns his commission on account of ill-health contracted on active service, and is granted the honorary rank of Major.

H. J. Shanley, late Captain, R.E. (T.F.), to be Lieutenant.

Cadet G. L. Matthews, from the O.T.C., to be Lieutenant.

To be Captains: Lieut. G. L. Matthews and Lieut. H. J. Shanley.

The undermentioned to be temporary Captains, Hampshire Medical Volunteer Corps: A. E. Clark (late Lieutenant, R.A.M.C.), A. C. D. Newton (late Lieutenant, R.A.M.C.).

Medical Officer and temp. Capt. A. D. Willcocks, from 1st Battalion, to be Medical Officer and temporary Captain, 3rd Battalion, Somerset Volunteer Regiment.

J. McC. McCarthy to be Medical Officer, with the temporary rank of Captain, 1st Battalion, Shropshire Volunteer Regiment.

T. W. Hinds to be temporary Captain, Kent Medical Volunteer Corps.

JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The November issue of this journal opens with a paper on Skin Diseases and their Treatment under War Conditions, which was read before the Section of Dermatology of the Royal Society of Medicine in April last by Major H. MacCormac. It is well illustrated, four plates being in colours, and deals with a problem which is of considerable importance from the point of view of man-power. Dietetic Fallacies in Connexion with Glycosuria and Albuminuria is the subject of an address by Major Herbert French, and the same issue contains the first part of a Report upon the Bacteriological Examination of One Thousand Soldiers Convalescent from Diseases of the Dysentery and Enteric Groups, by Captain William Fletcher. A joint Preliminary Clinical Report on Trench Fever, by Major W. Byam, Captain Lyn Dimond, Captain V. E. Sorapure, Lieutenant R. M. Wilson, and Lieutenant A. D. Peacock, essays to show that the well-known types of trench fever, with later a stage of slight pyrexia, headaches, anæmia, splenic enlargement, and increased irritability of the nervous system are one disease in succeeding stages, the general unfit man being most susceptible to the development of the chronic type; and, further, that this nervous irritability is the cause of a certain proportion of the D.A.H. cases now arising in France and other theatres of war. Preventive treatment resolves itself into a careful study of the prodromata and the search after means of eradicating the infection before it has gained the upper hand. The authors appeal to other workers to test the value of the various anti-protozoal compounds. "We have so far no data as to the value of acriflavine by mouth," they remark, "but one of us, in order to ascertain its effect on the stomach, has taken 10 cubic centimetres of the solution four-hourly for the past six days without being aware of any discomfort."

The War.

THE CASUALTY LIST.

THE following names of medical officers appear among the casualties announced since our last issue:—

Killed.

Capt. J. N. Griffiths, R.A.M.C., qualified at Sydney, New South Wales, in 1905, and held appointments at the Women's Hospital, Sydney, and at the Public Hospital, Perth, Australia. Later he came to England and practised in Welbeck-street, London, and was honorary assistant physician to the Chelsea Tuberculin Dispensary.

Died of Wounds.

Capt. J. O'S. Beveridge, R.A.M.C., qualified at Dublin in 1915, and joined up shortly afterwards.

Previously reported Wounded, now reported Died of Wounds.

Capt. G. Hislop, R.A.M.C., qualified at Glasgow in 1913, and was in practice at Glasgow prior to joining the R.A.M.C.

Wounded.

Capt. D. A. D. Kennedy, R.A.M.C., attached Rifle Brigade.
Capt. W. J. E. Mingie, Canadian A.M.C.
Capt. H. N. Goode, R.A.M.C.
Capt. L. J Hunter, Australian A.M.C.
Capt. F. H. Cleveland, R.A.M.C., attached Hussars.
Capt. T. R. Kenworthy, R.A.M.C.
Lieut.-Col. T. M. R. Leonard, West African Medical Service.
Lieut. R. A. Hosegood, R.A.M.C., attached Royal Scots.
Capt. A. Stewart, R.A.M.C.
Capt. C. O'Malley, R.A.M.C., attached Middlesex Regiment.

Missing.

Capt. R. T. Bruce, R.A.M.C.

CASUALTIES AMONG THE SONS OF MEDICAL MEN.

The following additional casualties among the sons of medical men are reported:—

Second Lieut. G. S. Gilbertson, Bedfordshire Regiment, killed in action, second son of Dr. J. H. Gilbertson, of Hitchin, Herts.

Capt. G. R. Nevitt, West Yorkshire Regiment, killed in action, son of the late Mr. J. G. Nevitt, M.R.C.S., of Leeds.

Capt. and Adjt. M. E. Parnell, Indian Cavalry, died of wounds, youngest son of Mr. G. C. Parnell, M.R.C.S., of Forest Hill, London, S.E.

Second Lieut. B. B. Hewat, Royal Field Artillery, killed in action, only child of Dr. M. L. Hewat, of Mowbray, Cape Town, South Africa.

Second Lieut. E. D. Smith, Sherwood Foresters, killed in action, only son of Dr. H. W. Smith, of Pleasley, Mansfield, Notts.

Second Lieut. I. C. Taylor, Royal Scots, killed in action, eldest son of Dr. J. C. Taylor, of Berwick-on-Tweed.

LORD FRENCH'S DESPATCHES.—The volume just issued by Messrs. Chapman and Hall ("The Complete Despatches of Lord French." Price 21*s.* net) in an edition limited to 500 copies, will prove to have historic value. Besides the text of the despatches it contains a complete list of the officers and men mentioned, amongst them no small proportion of the Army Medical Service and Royal Army Medical Corps.

HOSPITAL ACCOMMODATION FOR PENSIONERS.—The Minister of Pensions has appointed a committee including Sir Arthur Newsholme, Mr. J. Smith Whitaker, and Dr. Meredith Richards, with representatives from the War Office, to make a census of hospital accommodation in the country with a view to seeing if it is sufficient to deal with the ex-service men who still require medical or surgical treatment. The first meeting of the committee has been held and a report is expected at an early date.

TRAVELLING MEDICAL BOARDS.—The new Army Council instruction altering the constitution of travelling medical boards directs (1) that the president shall be selected from among the existing presidents or from temporary R.A.M.C. officers who are members of existing boards; (2) that the second permanent member shall be an R.A.M.C. officer selected by the D.D.M.S.; and (3) that the third member shall, in the case of large garrisons, be the commanding officer of a unit not being examined, and in the case of boards which ordinarily visit command depôts or small garrisons a permanent combatant officer (not below field rank) to be appointed by the War Office. The boards will in future undertake reclassification only and have nothing to do with the actual discharge of men from the service.

IMPROVEMENTS IN HOSPITAL ACCOMMODATION IN INDIA.—There are now, including beds for officers, 8115 British war hospital beds, 10,570 Indian war hospital beds, 6480 British convalescent beds, and 13,500 Indian convalescent beds for invalids from field service. Eighteen ocean-going hospital ships have been provided and 11 ambulance (hospital) trains and over 200 motor ambulance cars are now in service in India. Amongst the more notable of the British war hospitals are the Victoria (600 beds), Freeman Thomas (500 beds), Alexandra (618 beds), and the Baroda Hospital for Officers (75 beds), Bombay, the British General Hospital, Deolali (3000 beds), the Deccan War Hospital, Poona (1000 beds), and the Hislop War Hospital, Secunderabad (862 beds). These institutions now compare favourably with hospitals provided at home for casualties from the Western Front.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.—At a meeting of the Royal College of Physicians of Ireland, on Dec. 7th, it was resolved to invite all officers of the U.S. Army Medical Service stationed in Dublin or its neighbourhood to make use of the College library.

ROYAL INSTITUTION.—The following are among the lecture arrangements at the Royal Institution before Easter: Professor Arthur Keith, Fullerian professor of physiology, three lectures on the Problems of British Anthropology; Dr. Leonard Hill, two lectures on (1) the Stifling of Children's Health, (2) the Climatic Adaptation of Black and White Men; Sir R. T. Glazebrook, two lectures on the National Physical Laboratory; Professor William J. Pope, two lectures on the Chemical Action of Light; and Professor Sir J. J. Thomson, six lectures on Problems in Atomic Structure. The Friday meetings will commence on Jan. 18th, when Professor Sir James Dewar will deliver a discourse on Studies on Liquid Films. Succeeding discourses will be given, among others, by Principal E. H. Griffiths and Professor Sir J. J. Thomson.

APPOINTMENTS IN INDIA.—The services of Major L. Cook, I.M.S., are placed permanently at the disposal of the Government of Bihar and Orissa.—Lieutenant-Colonel C. H. James, C.I.E., I.M.S., is appointed to be Professor of Operative Surgery in the Medical College, Lahore.—Lieutenant-Colonel C. H. Bensley, I.M.S., is appointed Inspector-General of Prisons, Central Provinces.

DONATIONS AND BEQUESTS.—The Royal Dental Hospital has received a donation of 100 guineas from Messrs. Barnato Brothers "in memory of the late Mrs. Kate Joel."—The late Mr. George Fisher Melville, Advocate, of Edinburgh and Springfield, North Berwick, who died in July last, left nearly a quarter of a million sterling to be devoted to the "care and cure of cancer" and to research work in connexion therewith. The trust is in the hands of the Dean of Faculty of Advocates, the Deputy Keeper of the Signet, and the Master of the Merchant Company, the present holders of these offices being Mr. James Avon Clyde, Sir George M. Paul, and Mr. Alexander Darling respectively.—The late Mr. P. Vaughan, of Bristol, has bequeathed £6000 to the Queen Victoria Jubilee Convalescent Home, Durdham Downs, Bristol.

THE WANDSWORTH AND DISTRICT NON-PANEL ASSOCIATION.—At a meeting of medical practitioners of the Wandsworth and District Non-Panel Association held on Saturday, Dec. 1st, it was unanimously resolved:—

That the Wandsworth and District Non Panel Association approves and endorses the resolution of the council of the National Medical Union advising its members and all other non-panel medical practitioners to refrain from attending discharged disabled soldiers and sailors under the "special arrangements" of the Insurance Commissioners, but encouraging treatment in their private capacity; and extends this advice to the case of insured patients in hospitals or homes which receive grants from the Ministry of Pensions or the National Insurance Commissioners.

BRIGHTON HOSPITAL SUNDAY FUND.—The result of the Hospital Sunday collections in Brighton, Hove, and district this year surpassed all expectations. Usually £1000 is collected, but on this occasion an urgent appeal was made

that the total might be at least £1200 in view of the demands of the war upon the various institutions. The balance sheet just issued, however, shows that the total realised was £1527 15*s.* 3*d.*, against £1005 8*s.* 4*d.* in 1916. Substantial increased contributions have in consequence been allocated to 13 local medical charities, the Royal Sussex County Hospital receiving £674 as against £432, the Dispensary £183 as against £118, the Queen's Nurses £144 as against £90 10*s.*, the Royal Alexandra Hospital for Sick Children £140 as against £90, and the Women's Hospital £119 10*s.* as against £77, the remaining charities benefiting proportionately.

MEDICAL MAGISTRATE.—The Lord Chancellor has added the name of Mr. Lewis Mackenzie, F.R.C.S. Eng., L.R.C.P. Lond., of Tiverton, on the commission of the peace for the county of Devon.

WORKMEN'S DWELLINGS AT BRISTOL.—The Bristol Town Council has decided to erect 2000 working men's dwellings after the war.

PRESENTATION TO A MEDICAL MAN.—At the meeting of the patients and staff to celebrate the third anniversary of the opening of the V.A. hospital at Newton Abbot, Mr. Richard Henry Grimbly, medical officer in charge, was presented with a silver salver, suitably inscribed, as a mark of respect and gratitude from the nursing and kitchen staff.

BOMBAY WAR AND RELIEF FUND.—The Women's Branch of the Bombay Presidency War and Relief Fund, of which Lady Willingdon is president, gives a satisfactory account of its third year's work. During 1916 donations and subscriptions amounted to more than £23,000, while nearly £58,000 were expended on comforts and materials, and, independently of this, large quantities of gifts in kind were distributed among troops. The administration charges amounted to only 4·5 per cent. Government House was made available for war hospital nurses needing rest, and Mr. Byramjee Jeejeebhoy gave a bungalow at Bandra Point for a similar purpose. From the commencement of the work of the Women's Branch of the Fund the income from all sources has amounted to £129,071, most of which has been disbursed. An appeal for further support will shortly be issued. The beneficent work of the Fund should cause this appeal to meet with an immediate and satisfactory acknowledgment from the central offices of the Fund at Mayo Road, Fort, Bombay.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

National Health Insurance Bill.

THE National Health Insurance Bill has been passed by one of the Standing Committees of the House of Commons. It was expected that its report stage would be taken early this week, but the arrangements as to business prevented that. During its progress through Committee a number of amendments were made. The provisions of the clause respecting the removal of medical practitioners from panels have been extended, so that chemists may also be disqualified from supplying drugs in certain cases. The first subsection of the clause as amended reads as follows:—

> Where the Insurance Commissioners in pursuance of their powers under Section 15 of the principal Act remove the name of any medical practitioner or of any person, firm, or body corporate undertaking the supply of drugs, medicines, and appliances from any list of medical practitioners prepared under the said section, or from any list of such persons, firms, and bodies corporate as the case may be, they may, if they think fit so to do, remove his or their name from all or any of the other lists so prepared in which it is at the time included, and until such time as the Commissioners direct to the contrary that practitioner or person, firm, or body corporate shall be disqualified for inclusion in any other list, whether in England, Scotland, or Wales, in which his or their name was not then so included, or from which it was then removed.

The following provision respecting the travelling expenses of members of medical committees appears in Clause 41:—

> Any travelling expenses incurred by members of any local committee elected under Subsection (1) of Section 33 of the National Insurance Act, 1913, or of any committee elected by medical practitioners under Section 3 of the said Act in attending meetings of the committee or of any subcommittee thereof, and any expenses incurred by any such members on account of subsistence whilst so attending shall be deemed to be administrative expenses of the committee within the meaning of Subsection (2) of the said Section 33.

Milk for Children and Invalids.

It is explained by Mr. CLYNES, the Parliamentary Secretary to the Ministry of Food, that the Food Controller is aware of the increasing scarcity of milk, but he has no information that in any town invalids and children are finding it impossible to obtain milk. A circular is being issued to Food Control Committees, drawing their attention to their existing powers with regard to giving priority in milk supplies to children and invalids.

HOUSE OF COMMONS.

WEDNESDAY, DEC. 5TH.

Dispensers in Military Hospitals.

Replying to Mr. HOHLER, Mr. MACPHERSON (Under Secretary for War) said: All dispensers employed in military hospitals are required to be qualified under the conditions prescribed in the Standing Orders for the Royal Army Medical Corps. Female dispensers are employed whenever possible, and there is no information of any unqualified male dispensers being employed.

THURSDAY, DEC. 6TH.

Midwives (Ireland) Bill.

Answering Mr. MCKEAN, who asked what were the intentions of the Government with respect to the Midwives (Ireland) Bill, Mr. DUKE (Chief Secretary for Ireland) wrote: The second reading of the Bill has been blocked by Irish Members, and there is little hope of the Bill[1] making any substantial progress unless it can be regarded as non-controversial. I am aware of objections that have been raised to some of the provisions of the Bill, but these objections are based on matters of detail which can properly be dealt with in Committee, and I should be ready to consider any amendments that may be proposed in order to remove them.

National Insurance Grants.

Mr. DUNCAN MILLAR asked the Chancellor of the Exchequer whether, having regard to the health requirements of the nation, he was now prepared to sanction the payment of the grant-in-aid for administration and medical benefits, the grant-in-aid for sanatorium benefit, the grants to provide for the expenses of medical referee consultants and of specialist consultants in connexion with medical benefit and the equipment, &c., of clinics, and also the nursing grant, all of which grants had been suspended since the outbreak of war although appearing in the Estimates for National Health Insurance.—Mr. BONAR LAW answered: The suggestion made in the question will be carefully considered in connexion with the estimates of the National Health Insurance Department for the coming year, but having regard to the general financial situation I cannot pledge myself to the revival of all or any of those grants at the present time.

York Practitioners and Treatment of Invalid Soldiers.

Mr. BUTCHER asked the representative of the National Insurance Commissioners whether he was aware that every one of the medical practitioners on the York panel, now resident in the area, had refused to attend upon invalid seamen, marines, and soldiers under the regulations recently issued by the National Health Insurance Commission (England), but had offered to continue to treat them upon the old (capitation) basis of treatment pending negotiations between the Commissioners and representatives of the medical practitioners, and were at present treating them gratuitously; whether he was aware that the National Health Insurance Commission (England) had refused to allow these persons to be treated upon the capitation basis provided for in the agreements between the Insurance Committee and the practitioners; and what provision was at present made by the National Health Insurance Commission (England) or the York Insurance Committee for adequate medical attention to these insured persons.—Sir E. CORNWALL answered: In reply to the first two parts of the question I would refer my honourable friend to the answer to a question on the same subject given on Nov. 26th. On the last part of the question I may say that I am not aware that any insured persons are not receiving adequate medical attendance in the area in question, nor is there any reason why that attendance need be given gratuitously, for the Insurance Committee will pay any bills which are sent up in accordance with the authorised arrangements.

Care of the Blind in Ireland.

Mr. BRADY asked the Chief Secretary for Ireland whether he proposed to set up an advisory committee for Ireland in relation to improvements in the condition of the blind community similar to that being constituted for England and Wales; and what steps had he taken in the matter.—Mr. DUKE replied: I am in communication with the President of the Local Government Board on this subject.

Mr. BRADY: Is the right honourable gentleman aware that a resolution advocating the establishment in Ireland of such a committee was proposed recently by the Protestant Primate of Ireland and seconded by the Catholic manager of a Catholic institution for the blind?—Mr. DUKE: I can assure the honourable Member that full attention is paid to opinion in Ireland on this subject and to the great importance of the matter.

MONDAY, DEC. 10TH.

Panel Practitioners and Invalided Soldiers.

Mr. RAMSAY MACDONALD asked the representative of the National Insurance Commissioners whether he could state

[1] THE LANCET, Dec. 8th, p. 869.

the number of Leicestershire panel practitioners who had notified their respective Insurance Committees that they were not prepared to accept invalided seamen, marines, and soldiers on their lists under the terms of the new regulations.—Sir E. CORNWALL replied: The number of the doctors referred to is not known to me, but at the same time I am not aware of any medical practitioner having refused to render treatment in any such case. I may add that the doctors appear to have been under some misunderstanding in the matter, which a letter from the Commissioners, of which I am sending the honourable Member a copy, will, I hope, serve to remove.

Sir HOWELL DAVIES asked the same questions with regard to Bristol panel practitioners.—Sir E. CORNWALL replied: I am not aware of any medical practitioner in Bristol having refused to render treatment in any such case. I may add that the regulations in question are framed in accordance with the express desires of authoritative representatives of the medical practitioners concerned, and that events subsequent to their issue have shown that the regulations are in fact acceptable to the great majority of such practitioners.

Surgeon Probationers in the Navy.

Dr. MACNAMARA, Secretary of the Admiralty, speaking in regard to a vote dealing with naval personnel, said: As regards medical officers, a number are obtained by the entry of medical students as surgeon probationers of the Royal Naval Volunteer Reserve. These officers are demobilised after a certain time to enable them to complete their medical study, and on being demobilised they are asked if they are willing to re-enter as temporary surgeons when qualified. No compulsion is applied, and their refusal to re-enter does not prevent their being demobilised in the way I have indicated.

WEDNESDAY, DEC. 12TH.

Accommodation in Civil Hospitals.

Sir WM. COLLINS asked the Pensions Minister to state the terms of reference to the committee recently appointed by him to inquire into the accommodation in civil hospitals in Great Britain and the names of those composing the committee; and whether any representatives of the voluntary hospitals were included among the members of the committee.—Sir A. GRIFFITH-BOSCAWEN (Parliamentary Secretary to the Ministry of Pensions) wrote in reply: The terms of reference to the committee recently appointed by me for the survey of institutional accommodation and facilities of treatment in Great Britain are as follows:—

To ascertain the accommodation in civil and other hospitals and institutions (not being Poor-law institutions) for the treatment of sick persons and the facilities available for medical and surgical treatment and care other than that given by general practitioners in Great Britain; to consider, regard being had both to the needs of disabled men discharged from naval or military service and to those of the civilian population, the extent to which, and the means by which, such accommodation and facilities should, if necessary, be increased, and to report thereon at an early date.

The members of the section of the committee which will deal with England and Wales are: Sir A. Griffith-Boscawen (chairman), the Hon. Sir A. Stanley (Red Cross), Sir A. Newsholme (Local Government Board), Dr. J. Smith Whitaker, National Insurance Commission (England), Dr. H. Meredith Richards, National Insurance Commission (Wales), Sir George Bullock and Colonel Webb, R.A.M.C. (War Office), Colonel Sir J. Collie, Sir A. Pearce Gould, and Mr. C. F. A. Hare (assistant secretary to the Ministry). I propose to appoint a separate section of the committee to deal with Scotland. I have considered the desirability of appointing a member to represent the voluntary hospitals, and various names have been suggested to me. I shall be glad to discuss the matter with the honourable Member.

VILLAGE SETTLEMENTS FOR THE CURE AND TRAINING OF DISABLED EX-SERVICE MEN.

Lord HENRY BENTINCK convened a meeting on Dec. 10th in one of the committee rooms at the House of Commons to discuss the proposals, military and civilian, made by the Village Settlements Committee.[1] He pointed out that the number of men and the varieties of disablement were attaining such vast proportions that it was felt by the committee, of which he was a member, that voluntary effort must be put forth in close coöperation with the Ministry of Pensions in order that the problem should be adequately dealt with. A large country house and estate was obtainable where a centre could be started for carrying on both treatment and training. The Ministry of Pensions was not at present in sympathy with this committee's third object—viz., village communities—but fully approved the combining of treatment and training.

Dr. R. FORTESCUE FOX said the committee had three things in view—treatment, training, and settlement. Large numbers of men needed a long period of re-education in good surroundings, and it was essential that the centres for training should not be confined to towns. The Ministry of Pensions was not at present in favour of any permanent grouping of these men, but the permanent village settlement was not immediately in view.

Sir G. BULLOCK objected that disabled men ought not to be kept together except for purposes of treatment.

Mr. WARWICK DRAPER laid great stress on the remedial value of vocational training. The committee hoped to start a metropolitan centre in a carefully chosen site. The Board of Agriculture had promised to provide the necessary training of men able and willing to do agricultural work, and it was hoped that other Government departments would offer help of a like nature. The report, now printed and circulated among those present, had been considered and drawn up with great care.

Lord HENRY BENTINCK said the committee were willing and anxious to consider the joint settlement of disabled and of other discharged men together.

Mr. WARWICK DRAPER added that such settlement as was contemplated was primarily and mainly for the disabled men. The cost of the scheme as suggested would run into at least six figures. No public appeal had as yet been made, but steps were being taken to obtain a grant from public funds available for men injured in the defence of their country. The committee hoped to influence the public, and through it to modify the views of the Ministry of Pensions.

In reply to further questions, Lord HENRY BENTINCK said they proposed to act in good faith in regard to the collection of the necessary funds; and that the importance of placing settlements near suitable industries had been recognised.

Lord SANDWICH deprecated the collecting together of large numbers of men, although some grouping was necessary in order to provide facilities for treatment. Treatment in the cases of mental cripples was often of long duration, and some alternative to stay in hospital was essential.

[1] See THE LANCET, Nov. 3rd, p. 692.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

GRAHAM, R. B., F.R.C.S. Edin., has been appointed in charge of the Craigleith Military Hospital.

HODGE, AGNES J., M.B., C.M. Glasg., D.P.H., Medical Officer of Health for the County of Surrey.

LYONS, R. H., Captain, R.A.M.C., Tuberculosis Medical Officer for Co. Tyrone.

NORRIS, A. H., M.R.C.S., L.R.C.P. Lond., D.P.H., Chairman of the Juvenile Organisations Committee.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

When the application of a Belgian medical man would be considered the advertisers are requested to communicate with the Editor.

BELFAST DISTRICT ASYLUM.—Medical Superintendent of Purdysburn Villa Colony Asylum. Salary £700 per annum.

BIRKENHEAD, BOROUGH HOSPITAL.—Junior House Surgeon. Salary £170 per annum, with board, &c.

BRISTOL EYE HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with board, &c.

BRISTOL ROYAL INFIRMARY.—House Physician and House Surgeon. Salary at rate of £120 per annum, with board, &c.

BURTON-ON-TRENT INFIRMARY.—House Surgeon. Salary as arranged, with board, &c.

CHILDREN'S INFIRMARY, Cleveland-street, W.—Female Assistant Medical Officer. Salary at rate of £250 per annum, with board, &c.

DARLINGTON HOSPITAL.—House Surgeon. Salary £200 per annum, with board, &c.

DEPTFORD, METROPOLITAN BOROUGH OF.—Lady Medical Officer, four afternoons a week, for Maternity and Child Welfare Work.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, London, N.—Honorary Medical Officer in Charge of Electro-Therapeutic and Massage Department.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Two House Surgeons. Salary at rate of £100 per annum, with board, &c.

INVERNESS, NORTHERN INFIRMARY.—House Surgeon. Salary 3 guineas per week and war bonus, with board, &c.

KINGSTON-UPON-HULL, CITY AND COUNTY OF.—Resident Medical Officer. Salary £400 per annum, with board, &c.

LEEDS CITY, PUBLIC HEALTH DEPARTMENT.—Female Medical Assistant. Salary £350 per annum.

LEWISHAM, METROPOLITAN BOROUGH.—Assistant Medical Officer of Health and Maternity and Child Welfare Medical Officer. Salary at rate of £500 per annum.

MANCHESTER ROYAL INFIRMARY (CENTRAL BRANCH).—Resident Surgical Officer. Salary £200 per annum.

NEW HOSPITAL FOR WOMEN, Euston-road.—Female Surgeon for Throat and Ear Department.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—House Physician. Salary £200 per annum, with board, &c.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Temporary Assistant Physician. Salary at rate of £12 10s. for one attendance per week.

ST. GEORGE'S HOSPITAL.—Senior Assistant and Registrar in Venereal Diseases Department. Salary at rate of £250 per annum.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Senior House Surgeon. Salary £300 per annum, with board, &c.

STOKE-ON-TRENT, COUNTY BOROUGH.—Female Assistant Medical Officer. Salary £350 per annum.

WALSALL AND DISTRICT HOSPITAL.—Female Senior House Surgeon. Salary £250 per annum, with board, &c.

WEST HAM UNION INFIRMARY, Whipp's Cross-road, Leytonstone, E.—Temporary Assistant Medical Officer. Salary £300 per annum.

WILLESDEN URBAN DISTRICT COUNCIL, HEALTH DEPARTMENT.—Temporary Assistant Medical Officer. Salary 10 guineas per week.

THE Chief Inspector of Factories, Home Office, S.W., gives notices of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Kenilworth, Warwick; Killeshandra, Cavan; Wolsingham, Durham; and at Yarmouth, Isle of Wight.

Births, Marriages, and Deaths.

BIRTHS.

HEWLETT.—On Dec. 4th, at "Sunnycroft," Crawley Down, to Professor and Mrs. R. Tanner Hewlett—a son.

MICKLEM.—On Dec. 9th, at Northbridge, Boxmoor, the wife of Thomas Esmond Micklem, M.B., Lieutenant, R.A.M.C., of a son.

SEQUEIRA.—On Dec. 5th, at Charlton-terrace, Plymouth, the wife of Fleet-Surgeon W. S. H. Sequeira, R.N., of a daughter.

SMYTHE.—On the 7th Dec., at 28, St. George's-terrace, Trowbridge, Wilts, the wife of Captain Gerald Smythe, M.B., B.C. Camb., R.A.M.C., of a daughter.

SOLOMONS.—On Dec. 9th, at Fitzwilliam-square, Dublin, the wife of Bethel Solomons, M.D., F.R.C.P.I., of a son.

MARRIAGES.

COOK—REID.—On Dec. 4th, at St. Edmund's Church, Mansfield Woodhouse, Frank Cook, Captain, R.A.M.C. (S.R.), to Sister Edith H. W. Reid, youngest daughter of the late Rev. James Reid, of Co. Cork, Ireland.

GARRATT—TROTMAN.—On Dec. 5th, at the Catholic Cathedral, Brentwood, Essex, Captain Frank Garratt, R.A.M.C., to Winefride Mary, younger daughter of Mr. J. W. and the late Mrs. Trotman, of "Bromsgrove," Brentwood, Essex.

MOORE—GRANT.—On Dec. 7th, at Holy Trinity Church, Broadstairs, Leslie Moore, Lieutenant, R.A.M.C., to Marion, second daughter of the late Lieutenant-Colonel Grant, of Sunbury-on-Thames, and Mrs. Grant, Thicket Lodge, Broadstairs.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths

BOOKS, ETC., RECEIVED.

BALE, SONS, AND DANIELSSON, AND T. FISHER UNWIN, London.
Future of the Disabled Soldier. By C. W. Hutt, M.A., M.D., D.P.H. 6s. net.

BLACK, A. AND C., LIMITED, London.
Radiography and Radiotherapeutics. The Edinburgh Medical Series. By Robert Knox, M.D. Edin., M.R.C.S. Eng., L.R.C.P. Lond. Second edition. 30s. net.

HEINEMANN, WILLIAM, London.
The Psychology of War. By John T. MacCurdy, M.D. 2s. 6d. net.

LAURIE, T. WERNER, London.
Originality. Popular Study of the Creative Mind. By Thomas Shornol. 15s. net.

LEWIS, H. K., London.
Proceedings of the Prehistoric Society of East Anglia for 1916-17. Vol. II., Part III. 3s. 6d. net. Postage 4d.

LIPPINCOTT, J. B., COMPANY, London and Philadelphia.
White and Martin's Genito-Urinary Surgery and Venereal Diseases. By Edward Martin, A.M., M.D., F.A.C.S.; John Rhea Barton, Professor of Surgery, University of Pennsylvania; Benjamin A. Thomas, A.M., M.D., F.A.C.S., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine; and Stirling W. Moorhead, M.D., F.A.C.S., Assistant Surgeon to the Howard Hospital, Philadelphia, Pennsylvania. Tenth edition. 30s. net.
The Basis of Symptoms: The Principles of Clinical Pathology. By Dr. Ludolph Krehl, Ordinary Professor and Director of the Medical Clinic in Heidelberg. Authorised Translation from the seventh German edition by A. F. Belfeld, Ph.B., M.D., Instructor in Medicine, Northwestern University Medical School, Chicago; with an Introduction by A. W. Hewlett, M.D., Professor of Internal Medicine, University of Michigan. Fourth American edition. 21s. net.

LONGMANS, GREEN, AND CO., London.
The Conduction of the Nervous Impulse. By Keith Lucas, Sc.D., F.R.S. Revised by E. D. Adrian, M.B., M.R.C.P. 5s. net.

MACMILLAN AND CO., London.
Lord Lister. By Sir Rickman J. Godlee, Bart., K.C.V.O., M.S., F.R.C.S. 18s. net.

METHUEN AND CO., London.
The Health of a Woman. By R. Murray Leslie, M.A., B.Sc., M.D. 1s. 3d. net.

OCEAN HOUSE, 3, Old Broad-street, E.C.
Links with the Past. By A. F. Shepherd.

OPEN COURT PUBLISHING COMPANY, Chicago and London.
An Ethical System Based on the Laws of Nature. By M. Deshumbert. Translated from the French by L. Giles, M.A., D.Litt., with preface by C. W. Saleeby, M.D., F.R.S. Edin. 2s. 6d. net.

STANFORD, EDWARD, London.
British Rainfall, 1916. By Hugh R. Mill and Carle Salter. Fifty-sixth annual volume. 10s.

Notes, Short Comments, and Answers to Correspondents.

MEDICAL INVENTORS.

MEDICAL men, especially surgeons, as would be expected, have invented many new instruments and much new apparatus to assist them in their operative work. But it is not widely known that medical men have often been the originators of inventions for general or lay use. Thus Charles Brooke (1804–79), one of the first Cambridge graduates to become F.R.C.S.—twenty-third Wrangler in 1827—invented not only the "bead suture," which marked a step forward in the treatment of deep wounds, but also the exquisite self-recording instruments now in use in all important astronomical observatories. The famous James Syme, whose character Dr. John Brown summed up as "verax, capax, perspicax, sagax, efficax, tenax," may be termed the father of "the mackintosh," in that he was the inventor of waterproofing, the garment being courteously called after a famous clan in his native land, where its uses are perpetual. James Startin (1806–72), F.R.C.S., made an important commercial discovery when as a youth he was studying his profession in the laboratory of Mr. Chawner, of Atherstone, to whose firm he was apprenticed. This discovery was the process of stiffening felt hats. To Startin, therefore, we may be said to owe the useful, though ugly, bowler hat. *Papier-maché* and plaster-of-Paris are also, we believe, the inventions of medical men. But perhaps the most distinguished inventor of a surgical appliance, afterwards turned to world-wide commercial and domestic account, was William Rawlings Beaumont, F.R.C.S., M.D., of Toronto. His instrument for making deep sutures, first used in 1837 by Lawrence when operating on a cleft palate, was believed to have suggested the sewing-machine to Singer. "If it be true," said Sir James Paget, "that the sight of this instrument in the window of an instrument-maker in New York suggested the invention of the Singer sewing-machine, we might regret that mechanical ingenuity should gain so much less money in surgery than in trade."

These remarks have been prompted by a piece of information, rather in the nature of a question put to us by a correspondent in the following terms:—Thomas Michael Greenhow (1792–1881), F.R.C.S., was a man of great mechanical ingenuity and constructed various instruments and modifications of surgical appliances which his long experience at the Newcastle Infirmary suggested to him. But besides his well-known "fracture-bed" of date 1833 he made models of machines of various kinds unconnected with his surgical practice, and was busy with these lay inventions up to the close of his long life. One would like to know more about them, for they are presumably extant.

It would be interesting to know what the late T. M. Greenhow actually invented. He was a man of great ingenuity and not likely to have spent his time in futile experiment. Perhaps someone can enlighten our correspondent.

WHAT'S IN A NAME?

IN the third number of an excellent *Journal of the Department of Public Health*, issued in Wellington by Hon. G. W. Russell, Minister of Public Health, is an article on "Twilight Sleep," which the Journal states is as well known to the medical profession in New Zealand as elsewhere. The experience is given of various St. Helens hospitals, which may be summed up in a sentence: "We still use it in many cases, but not so generally as formerly. It is not without risks, especially to the infant, and is not in favour with the ordinary practitioner on that account." The conclusion drawn is that whilst, generally speaking, little or no ill-effects result to the mother from the use of the drug, yet for the sake of the baby the mother should make an endeavour to submit to some of the pains of labour under natural conditions. The popularisation of the treatment is attributed to its alluring title. Would "Twilight Sleep" have gained any popularity, the question is asked, if it had been termed "The Dope Delivery Method," or the "Half-dead Baby System"?

SURGERY IN JERUSALEM OVER 3000 YEARS AGO.

To the Editor of THE LANCET.

SIR,—The news of the capture of Jerusalem by General Allenby reminds me that in the first chapter of Judges it is stated that Judah fought against the Canaanites and the Perizzites and smote of them in Bezek in Palestine 10,000 men. And they found Adoni-bezek (the Lord of Bezek) in Bezek but he fled, and they pursued after him, and cut off his thumbs and his great toes. And Adoni-bezek said, "Three score

and ten kings, having their thumbs and their great toes cut off, gathered their meat under my table: as I have done, so God hath requited me. And they brought him to Jerusalem, and he died there." This seems to imply that although the surgical operations had been successful in the case of the 70 kings who lived to eat meat, it was unsuccessful in the case of Adoni-bezek, and that he died therefrom. I do not know if there is a term describing this operation, but I suppose it would be called "wholesale pollectomy." It was evidently a routine practice, and must have prevented a man holding a weapon or running away. I am, Sir, yours faithfully,

Dec. 11th, 1917. SALEM.

*** According to Ælian, in after ages, the Athenians, at the instigation of Cleon, son of Cleænetus, made a decree that all the inhabitants of the island of Ægina should have the thumb cut off from the right hand, so that they might ever after be disabled from holding a spear, yet might handle an oar. It was a custom among those Romans who did not like a military life to cut off their thumb that they might be incapable of serving in the army; and for the same reason parents sometimes cut off the thumbs of their children.—ED. L.

PARAFFIN IN THE TREATMENT OF WOUNDS.

As a result of extensive comparative observations, Professor Giovanni Masnata, at present in charge of the military hospital at Stradella (Pavia), concludes that paraffin of melting point 50–52° C. is as efficacious as ambrine in the treatment of wounds. His results appear in detail in *Il Policlinico*, vol. xxiv., C., 1917.

A CURIOUS ACTION OF MERCURY ON ALUMINIUM.

To the Editor of THE LANCET.

SIR,—Some years ago I also had the curious experience of witnessing this thing that Dr. Cameron Kidd relates in THE LANCET for Nov. 24th. I was working with mercury and accidentally placed an excess of the Hg in the aluminium top of a bottle. I went on with my work and in a few minutes afterwards my attention was arrested by the peculiar behaviour of the aluminium lid: the lid was visibly sprouting a fine growth of white "worms" in a dozen different directions. One could *see* them growing outward and falling off. I demonstrated it to many people, including chemists, but I do not think any of them understood the reason why. I see your consulting chemist has confirmed these interesting observations. I have performed the experiment in the absence of breathing and moisture—i.e., in a dry heat—so the explanation must be sought in another direction. It is very interesting.

I am, Sir, yours faithfully,

M. H. FLEMING,

Biscot Camp, Luton, Beds, Dec. 3rd, 1917. Captain, R.A.M.C.

JUVENILE CRIME.

WE have received a letter, signed by Lord Lytton and other officers of the State Children's Association (53, Victoria-street, London, S.W.), lamenting the practice of sending to prison boys between the ages of 15 and 18. For these our present prison system is, they state, never reformative, and imprisonment is unnecessary in view of the alternative system of probation which the justices have employed in some London and provincial courts with admirable effect. Numbers of young persons so dealt with after a probationary term make no further appearance before the justices. The letter therefore appeals to men and women possessing sympathy with and understanding of the young to offer their services to the local benches of magistrates as voluntary probation officers for one, two, or more children. Under the influence of a steadying friendship a great number of the juvenile offenders of to-day may well become trustworthy citizens of to-morrow.

FIRE PREVENTION AT CHRISTMAS.

WITH the near approach of Christmas, and its increased dangers from fire, particularly in hospitals and other places where entertainments are given, the British Fire Prevention Committee (8, Waterloo-place, London, S.W. 1) have again issued a Christmas entertainments fire-warning sheet, No. 22A, showing what should be done to lessen the risk and to cope with an outbreak of fire if it occurs. 10,000 copies of the sheet are being exhibited throughout the country, and a single copy will be sent upon written application enclosing a stamped envelope.

Civil Medical Practitioner refers with justice to the fact that it is easier for his class to obtain unpaid than paid military work. The Central Medical War Committee welcomes the names of practitioners who are willing and able to relieve their juniors in civil practice.

A Transcriber's Gloss.—The R.A.M.C. orderlies who are charged with much of the transcribing incident on medical case-taking as a rule do well, but a correspondent sends us an entry—"chronic *intestinal* nephritis"—which was at first sight puzzling

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

Tuesday, Dec. 18th.

GENERAL MEETING OF FELLOWS, at 5 P.M.

Ballot for Election to the Fellowship. (Names already circulated.)

MEETINGS OF SECTIONS.

Wednesday, Dec. 19th.

HISTORY OF MEDICINE (Hon. Secretaries—J. D. Rolleston, Charles Singer): at 5 P.M.

Exhibition of Pictures, Books, &c. (at 4.30 P.M.).

Papers:

Dr. G. C. Peachey: The Two John Peacheys, Seventeenth Century Physicians: their Lives and Times.

Dr. C. G. Cumston: (1) Morgagni and the Foramen Cæcum; (2) The Death of King Henry II. of France, with a rare engraving of the event.

Thursday, Dec. 20th.

DERMATOLOGY (Hon. Secretaries—J. E. R. McDonagh, H. MacCormac; Acting Hon. Secretary—S. E. Dore): at 5 P.M.

Cases will be shown.

Friday, Dec. 21st.

ELECTRO-THERAPEUTICS (Hon. Secretaries—E. P. Cumberbatch, Robert Knox): at 8.30 P.M.

Paper:

Mr. A. E. Baines: On the Interpretation of Certain Electro-Physiological Phenomena.

ROYAL STATISTICAL SOCIETY, at the Surveyors' Institution, 12, Great George street, S.W. 1.

TUESDAY.—5.15 P.M., Paper:—Sir R. Henry Rew, K.C.B.: The Prospects of the World's Food Supplies after the War.

ROYAL SOCIETY OF ARTS, John-street, Adelphi, W.C.

WEDNESDAY.—4.30 P.M., Prof. J. W. Anderson: Science and the Cold Storage Industry.

ROYAL MICROSCOPICAL SOCIETY, 20, Hanover-square, W. 1.

WEDNESDAY.—8 P.M., Paper:—Prof. W. Bateson: Cytology and Genetics.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.

FRIDAY.—5.30 P.M., Paper:—Col. J. H. T. Walsh, I.M.S. (retired): The Geographical Distribution of Human Diseases and their Control.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith road, W.

MONDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Gray: Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women.

TUESDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Banks Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Arthur Saunders: Diseases of Children. Dr. Banks Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Gray: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Simson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Banks Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Arthur Saunders: Diseases of Children. Dr. Banks Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Eye Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

EDITORIAL NOTICES.

IT IS most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, *and when accompanied by blocks it is requested that the name of the author, and if possible of the article, should be written on the blocks to facilitate identification.*

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET should be addressed "To the Manager."

We cannot undertake to return MSS. not used.

Offices: 423, STRAND, LONDON, W.C. 2.

THE address of the Australian Red Cross Society is now 36, Grosvenor place, London, S.W. 1.

MANAGER'S NOTICES.

TO SUBSCRIBERS IN THE UNITED STATES.

Messrs. Wm. Wood and Co., of New York, are relinquishing their Agency for the supply of THE LANCET in the United States at the end of the present year. The Manager of THE LANCET will be pleased to supply copies direct from the London Office to subscribers in the United States at the strictly prepaid rate of $8 for twelve months. Subscriptions may commence at any time. Drafts and Money Orders should be made payable to the Manager, Mr. CHARLES GOOD, 1, Bedford-street, Strand, London, W.C. 2, England.

TO SUBSCRIBERS.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

TO COLONIAL AND FOREIGN SUBSCRIBERS.

Subscribers abroad are particularly requested to note the rates of subscriptions given on advertisement page 8.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the rates shown, whatever be the weight of any of the copies so supplied.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 12th, 1917.

Date.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 6	...	55	51	35	32	35	Foggy
,, 7	...	56	53	35	50	51	Overcast
,, 8	0·01	52	47	45	44	45	Raining
,, 9	0·35	49	43	40	39	41	Raining
,, 10	0·09	52	44	40	40	43	Fine
,, 11	0·04	52	43	41	38	41	Overcast
,, 12	...	42	40	35	33	35	Overcast

Other information which we have been accustomed to give in these "Readings" is withheld for the period of the war.

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Mr. E. Arnold, Lond.; Dr. H. G. Adamson, Lond.; Austin Motor Co., Birmingham; Mr. P. Aldridge, Lond.; Messrs. E. G. Allen and Son, Lond.; Anglo-American Pharmaceutical Co., Croydon; Messrs. Claudius Ash, Sons, and Co., Lond.; Anglo-French Drug Co., Lond.; Lieut.-Col. J. G. Adami, A.D.M.S.; Mr. I. Alfsen, Moss, Norway; Major Annis, R.A.M.C.; Dr. M. Atal, Lond.; Mr. R. J. Albery, Lond.

B.—Dr. J. Brown, Blackpool; Mr. P. Benham, Lond.; Messrs. W. H. Bailey and Son, Lond.; Mr. J. F. Briscoe, Southampton; Mr. G. P. Butcher, Plymouth; Messrs. Butterworth and Co., Lond.; British Fire Prevention Committee, Lond.; Burton-on-Trent Infirmary, Hon. Sec. of; Mr. J. F. Burton, Runcorn; Buxton Urban District Council, (Publicity Department): Messrs. C. Barker and Sons, Lond.; Miss S. N. Brown, Dunmow; Dr. C. A. Bucklin, Glasgow; British Drug Houses, Lond.; Dr. W. Bruce, Dingwall; Board of Agriculture and Fisheries, Lond.; Dr. J. Blomfield, Lond.; Surg.-Gen. Sir David Bruce, C.B.; British Red Cross Society, County of London Branch, Sec. of; Bristol-Myers Co., New York; Capt. C. A. Barager, C.A.M.C.; Messrs. Burroughs Wellcome and Co., Lond., Messrs. John Bale, Sons, and Danielsson, Lond.; Bristol Eye Hospital, Sec. of; Messrs. W. Brown and Son, Huddersfield.

C.—Mr. W. Clifford, Lond.; Messrs. Currruthers and Sons, Inverness; Messrs. E. Cook and Co., Lond.; Canadian War Contingent Association, Lond., Sec. of; Messrs. G. W. Carnrick Co., New York; Messrs. T. Christy and Co., Lond.; Dr. W. M. Crofton, Dublin; Mr. J. Cabburn, Lond.; Mr. W. Cowdery, Lond.

D.—Lieut. G. D. Dawson, R.A.M.C.; Dr. G. B. Dixon, Birmingham; Dr. Grace H. G. Dundas, Leith; Messrs. W. Dawson and Sons, Lond.; Messrs. Down Bros., Lond.; David Lewis Colony, Warford, Sec. of; *Dental Record*, Lond., Publisher of.

E.—Lieut.-Col. R. H. Elliot; Messrs. Elliott and Sons, Lond.; Dr. W. Ettles, Lond.; Edinburgh University Union. Treas. of.

F.—Dr. V. M. Fisher, Sutton; Fiji, Chief Medical Officer of; Messrs. Fannin and Co., Dublin; Dr. A. C. D. Firth, Eastbourne; Capt. W. K. Fry, R.A.M.C.; F. W.; F. L. D.; Mr. J. S. Ferris, Ealing; Ferrocarril de Antioquia, Medellin.

G.—Dr. H. C. Gillies, Manchester; Mr. H. Green, Lond.; Messrs. W. Gaymer and Son, Attleborough; Surg. H. H. Gellert, R.N.; Dr. A. S. Gubb, Mustapha Supérieur; Major H. D. Gillies, R.A.M.C.; Capt. G. C. Gray, R.A.M.C.(T.); Capt. E. Glyn, R.A.M.C.; Dr. A. W. Green, Lond.; Dr. W. Gordon, Exeter.

H.—Mr. E. M. Harvey, Lond.; Mr. J. H. Hollyer, Droitwich; Messrs. C. J. Hewlett and Sons, Lond.; Capt. C. R. R. Huxtable, R.A.M.C.; Mr. E. Hindle; Major T. G. M. Hine, R.A.M.C.; Mr. F. Hargreaves, Manchester; Hoffmann-La Roche Chemical Works, Lond.; Hospital for Sick Children, Lond., Acting Sec. of; Dr. T. J. Hudson, Leeds; Major F. T. G. Hobday, A.V.C.; Dr. H. L. Hamilton, Southampton; Dr. V. S. Hodson, M.V.O., Khartoum: Mr. J. T. Henderson, Pietermaritzburg; Mr. C. H. Hudson, Barrow-in-Furness; Hull Corporation, Medical Officer of Health of.

I.—Incorporated Society of Trained Masseuses, Lond., Organising Sec. of.

J.—Lieut. H. E. Jones, R.A.M.C.; Capt. W. H. Johnston, R.A.M.C.; Dr. J. P. Johnson, Johannesburg.

K.—Kesteven County Asylum.

L.—London School of Tropical Medicine. Asst. Librarian of; Messrs. H. K. Lewis and Co., Lond.; Leeds City Sanitary Dept., Clerk to the.

M.—Dr. Dan McKenzie, Lond.; Capt. W. P. Morgan, R.A.M.C.; Messrs. Methuen and Co., Lond.; Mrs. John Mortimer, Exeter; *Midland Counties Herald*, Birmingham; Dr. G. Mowat, Ipswich; Miss E. Myers, Cambridge; Manhu Food Co., Liverpool; Maltine Manufacturing Co., Lond.; Mr. C. A. Morton, Clifton; Messrs J. F. Macfarlan and Co., Lond; The Medical Supply Association, Lond.; *The Modern Hospital*, Chicago, Associate Editor of; Maruzen Co., Tokyo, Messrs. Mather and Crowther, Lond.; Mundesley Sanatorium, Medical Supt of; Ministry of National Service, Lond.

N.—Mr. A. E. Nicholls, Meole Brace; Dr. T. North, Lond.; New Zealand, Department of Public Health, Hospitals and Charitable Aid, Wellington; *National Food Journal*.

O.—Dr. A. W. Oxford, Etrembières; Dr D. Orr, Manchester.

P.—Mr. J. J. Pickles, Lond.; Dr. F. L. Pyman, Lond.; Dr. E. E. Prest, New Cumnock.

Q.—Queen Mary's Hospital for the East End, Stratford, Sec. of; Queen's Hospital for Sailors, Hon. Sec. of.

R.—Royal Society of Arts, Lond.; Dr. A. Routh, Lond.; Registered Nurses' Society, Lond., Sec. of; Mr. J. H. Rodgers, Bromley; Royal College of Surgeons, Lond., Sec. of; Royal Institution, Lond.; Royal Microscopical Society, Lond., Sec. of; Royal Dental Hospital of London, Sec. of; Lieut.-Col. F. Romer, R.A.M.C.; Royal Academy of Medicine in Ireland, Dublin; Prof. C. Ruata, Perugia.

S.—Mr. T. W. Smyth, Enniskean; Messrs. G. E. Stechert and Co., Lond.; Mr. W. B. Saw, Lond.; Messrs. G. Street and Co., Lond.; Prof. S. G. Shattock, Lond.; Mr. H. H. Sanguinetti, Lond.; Mr. L. Stroud, Lond.; Society of Tropical Medicine and Hygiene, Lond.; Prof. A. Smith, Dublin; Prof. C. S. Sherrington, Oxford; Dr. H. R. Steen, Dartford; Mr. W. M. Scott, Bridgwater; Dr. W. C. Stevenson, Dublin; Mr. J. Stott, Manchester; Society of Public Analysts, Lond., Joint Hon. Sec. of; Capt. R. V. Steele, R.A.M.C.; Messrs. Siebe, Gorman, and Co., Lond.; Mr A. Scott, Bangor.

T.—Dr. A. W. Tuxford, Creaton; Messrs. Tolmé and Runge, Lond.; Major W. K. Turrell, R.A.M.C.; Mr. E. Thompson Lond.; Messrs. Tuckers and Blakes, Bristol; *Therapeutic Gazette*, Lond., Publisher of.

W.—Capt. C. D. Walker, R.A.M.C.; Major W. J. Wilson, R.A.M.C.(T.); Dr. H. M. M. Woodward, Lond.; Dr. L. A. Weatherly, Bournemouth; Wandsworth and District Non-Panel Association, Hon. Sec of; Capt. E. H. Worth, R.A.M.C.; Witherby Advertising Co. Lond.; Col. Sir A. E. Wright, R.A.M.C.; Willesden Urban District Council, Medical Officer of Health of; Messrs. J. Wright and Sons, Bristol.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. G. Aubrey, Cheltenham; Messrs. Arnold and Sons, Lond.; Dr. J. Allan, Exeter; Mrs. Arkle, Lond.; Aegis Assurance and Trust Co., Port Elizabeth, Sec. of; Anti-Vivisection Society, Lond., Treas. to the.

B.—Mrs. Burd, Shrewsbury; B. D.; Bristol University, Registrar to the; Bolton Infirmary, Sec. of; Dr E. M. Brockbank, Manchester; Col. C. A. Ballance, A.M.S.; Borax Consolidated. Lond., Sec. of; Capt. H. T. H. Butt, R.A.M.C.; Capt. G. V. Bedford, C.A.M.C.; Mr. H. R. Bles, Bere Alston; B. C.

C.—Messrs. Cargills, Glasgow; Mr. G. W. F. Clark, Plymouth; Clare Hall Sanatorium, South Mimms Medical Supt. of.

D.—Dorland Agency, Lond., Sec. of; Daimler Co., Coventry; Messrs. Drayton and Sons, Exeter.

E.—Messrs. Evans, Sons, Lescher, and Webb, Lond.

F.—Messrs. H. Frowde and Hodder and Stoughton, Lond.; F. M. W.; Mr. J. Forbes, Alfreton.

G.—Dr. G. Garrey, Peterhead; Guest Hospital, Dudley, Sec of; Mr. J. H. Goring, Lond.; Major E. W. H. Groves, R.A.M.C.; Messrs. Grindlay and Co., Lond.; Mr. S. Greig, Edinburgh; Mrs. Goodwin, Melton Constable; Dr. S. Gill, Formby.

H.—Major A. F. Hurst, R.A.M.C.; Major W. E. Home, R.A.M.C.; Miss E. M. Horsburgh, Lond., Major A. C. Hartley, R.A.M.C.; Messrs. Hard and Rand, Lond.; Dr. C. Horsfall, Newquay; Messrs. Henderson and Son, St. Andrews; H. M. S. G.; Messrs. Abel Heywood and Son, Manchester

I.—Mr. E. R. Ivatts, Thaxted; Major H. Irvine, R.A.M.C.; Ionian Bank, Lond., Manager of; Inquiry Bureau, Bristol, Sec. of; International News Co., Lond.

J.—Lieut. A. B. Jones, R.A.M.C.; J. H. B.

L.—Mr. R. Lloyd, Burnham-on-Crouch; Messrs. Leslies, Lond., Capt. N. C. Lake, R.A.M.C.; Capt. W. R. Logan, R.A.M.C.; Leicester Royal Infirmary, Sec. of; L. M. G.

M.—Dr. S. B. Malherbe, Ficksburg; Major F. F. MacCabe, R.A.M.C.; Messrs. Macmillan and Co., Lond.; Mr. S. A. O. Mackenzie, Harrogate; Mr. E. Meadows, Otley; Dr. D. MacEnricht Cork; M. G., Westcliff; Middlesbrough Insurance Committee, Clerk to the; Lieut. Col. MacLaughlin; Male Nurses' Temperance Co-operation, Lond., Sec. of.

N.—Mr. A. B. Norman, Oakham; Mr. A. Nallue, Villeneuve; Mrs. Nathan, Lond.

O.—Dr. Orr, Lyndhurst.

P.—Dr. J. S. Prowse, Manchester; Capt. J. Parkinson, R.A.M.C.; Pharmaceutical Society of Great Britain, Lond., Sec. of; Le Directeur de l'Office International d'Hygiene Publique, Paris, Mr. F. G. Pulman, Lond.; Messrs. Philip, Son, and Nephew, Liverpool.

R.—Dr. M. J. Ryan, Crumlin; Major T. R. Ritchie, N.Z.M.C.; Col. R. D. Rudolf, C.A.M.C.; Mr. S. H. Rouquette, Lond.; Major L. B. Robertson, C.A.M.C., Miss F. M. Ryley, Lond.

S.—Mr. A. J. Sunnuck, Lond.; Surg. G. J. C. Smyth, R.N.; Capt. G. A. Smyth, R.A.M.C.; Southampton Free Eye Hospital, Sec. of; Dr. O. Sunderland, Bexley; Dr. E. N. Smith, Boscombe; Capt. A. G. Shera, R.A.M.C.; Surrey County Council, Kingston-on-Thames, Acct. to the. Dr. G. A. S. Sander, Wateringbury; Lieut.-Col. P. Sargent, A.M.S.; State Medicine Syndicate, Cambridge. Mrs. Symonds, Oxford; Capt. C. E. Sundell, R.A.M.C., Capt. J. F. Smith, R.A.M.C.

T.—Dr. B. N. Tebbs, Southampton; Dr. J. E. Thompson, Galveston; T. F. W.

V.—Vitamogen Co., Lond.

W.—Major C. White, R.A.M.C.; Messrs. Willing, Lond.; W. H. M.; Mr. A. Wilson, Lond.; Mr. T. Wyse, Margate; Col. A. E. Webb-Johnson, A.M.S.

Y.—Messrs. A. Young, Lond.; Messrs. H. Young and Sons, Liverpool.